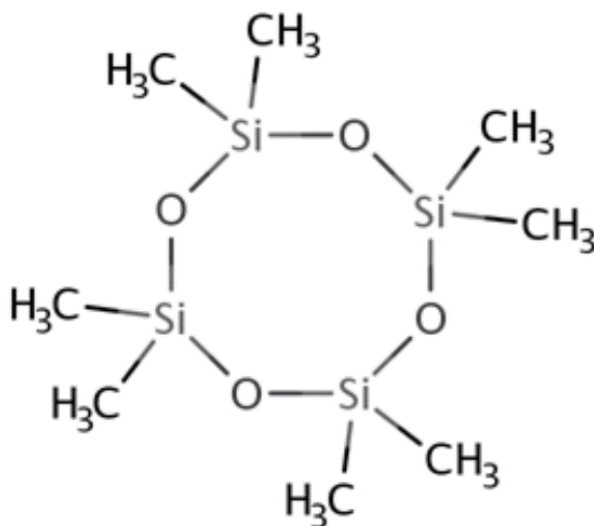

**Data Quality Evaluation and Data Extraction Information for
Physical and Chemical Properties for
Octamethylcyclotetrasiloxane (D4)**

Systematic Review Support Document for the Draft Risk Evaluation

CASRN: 556-67-2



September 2025

This supplemental file contains information regarding the data extraction and evaluation results for data sources that were considered for the *Draft Risk Evaluation for Octamethylcyclotetrasiloxane (D4)* and that underwent systematic review. EPA used the TSCA systematic review process described in the *Draft Systematic Review Protocol Supporting TSCA Risk Evaluations for Chemical Substances* (also referred to as the '2021 Draft Systematic Review Protocol'). The systematic review steps are further described in the *Draft Systematic Review Protocol for Octamethylcyclotetrasiloxane (D4)*. EPA conducted data extractions and data quality evaluations based on author-reported descriptions and results; additional analyses (*e.g.*, statistical analyses) potentially conducted by EPA are not contained in this supplemental file. Additionally, the overall quality determination (OQD) for each reference represents the data as a whole for each study and not for individual metric domains within a study.

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7995011	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.	11
6982832	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.	12
6982970	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.	14
6982833	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.	15
7994661	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.	16
6834323	Fuller, J., White, D., Yi, H., Colley, J., Vickery, Z., Liu, S. (2020). Analysis of volatile compounds causing undesirable odors in a polypropylene - high-density polyethylene recycled plastic resin with solid-phase microextraction. Chemosphere 260:127589.	17
6982832	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.	18
6982970	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.	20
6982833	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.	21
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6835590	Abbas, R., Schedemann, A., Ihmels, C., Enders, S., Gmehling, J. (2011). Measurement of thermophysical pure component properties for a few siloxanes used as working fluids for organic rankine cycles. Industrial and Engineering Chemistry Research 50(16):9748-9757.	22
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7991715	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.	25
7992314	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.	26
7994661	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.	27
7995011	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.	28
7998725	Haynes, W. M. (2014). 1,1,3,3-Tetramethyl-1,3-disiloxanediol. :3-506.	29
6982969	Haynes, W.,M. (2014). Octamethylcyclotetrasiloxane. :3-424.	30
6982832	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.	31
6982970	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.	32
6982833	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.	33
7296376	SEHSC, (2020). Request for risk evaluation under the Toxic Substances Control Act; Octamethylcyclotetrasiloxane (D4; CASRN: 556-67-2).	40

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7991715	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.	44
7992314	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.	46
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6982970	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.	53
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6984075	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..	65
7991715	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.	66
7992314	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.	67
7994661	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.	68
7995011	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.	69
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3569075	Palczewska-Tulinska, M., Oracz, P. (2005). Selected physicochemical properties of hexamethylcyclotrisiloxane, octamethylcyclotetrasiloxane, and decamethylcyclopentasiloxane. Journal of Chemical and Engineering Data 50(5):1711-1719.	75
6982833	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.	76
7999339	RSC, (2021). ChemSpider: Dimethylsilanediol.	80

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4279677	Zhang, Y., Dong, H., Wu, C., Yu, L., Xu, J. (2015). The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures. Journal of Chemical Thermodynamics 81:16-25.	81
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9960764	Compton, K. L. (2019). Dietary biotransformation and bioaccumulation of cyclic siloxanes in rainbow trout (<i>Oncorhynchus mykiss</i>).	82
9644522	Corning,, Dow (2014). Non-regulated study: DMSD environmental modeling using SIMPLETREAT and QWASI.	83
6989156	Flaningham, O. L. (1986). Vapor pressures of poly(dimethylsiloxane) oligomers. Journal of Chemical and Engineering Data 31(3):266-272.	84
7303416	Kochetkov, A., Smith, J. S., Ravikrishna, R., Valsaraj, K. T., Thibodeaux, L. J. (2001). Air-water partition constants for volatile methyl siloxanes. Environmental Toxicology and Chemistry 20(10):2184-2188.	85
2629388	Lei, Y. D., Wania, F., Mathers, D.,an (2010). Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers. Journal of Chemical and Engineering Data 55(12):5868-5873.	86
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5905948	Corning,, Dow (1987). The n-octanol/water partition coefficient of octamethylcyclotetrasiloxane with attachment and cover letter dated 092987.	96
7310176	Corning,, Dow (1982). Subject: Monthly summary 10/1982, octanol-water coefficients.	97
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9953733	Kurume Laboratory, (2021). Determination of the n-octanol/water Partition Coefficient of DHDMS (HPLC method).	112
6982832	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.	113
6982826	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.	114
2188633	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.	115

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2535012	Xu, S., Kropscott, B. (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12):2702-2710.	118
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5895933	Corning,, Dow (1993). Aqueous solubility of the oligometric permethylsiloxanes with cover letter dated 090893.	121
5905948	Corning,, Dow (1987). The n-octanol/water partition coefficient of octamethylcyclotetrasiloxane with attachment and cover letter dated 092987.	122
5905954	Corning,, Dow (1987). The water solubility of octamethylcyclotetrasiloxane with attachments and cover letter dated 092987.	123
7310465	Corning,, Dow (1991). Aqueous solubility studies of octamethylcyclotetrasiloxane.	124
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7995011	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.	127
6833841	Gee, R. P. (2015). Emulsion polymerization of dimethylcyclsiloxane in cationic emulsion: Mechanism study utilizing two phase liquid-liquid reaction kinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects 481:297-306.	128
7303416	Kochetkov, A., Smith, J. S., Ravikrishna, R., Valsaraj, K. T., Thibodeaux, L. J. (2001). Air-water partition constants for volatile methyl siloxanes. Environmental Toxicology and Chemistry 20(10):2184-2188.	130
6982832	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.	131
7997877	NLM, (2021). Pubchem: 1,3-Disiloxanediol, 1,1,3,3-tetramethyl-. CAS registry number: 1118-15-6.	134
7998093	NLM, (2021). Pubchem: Dimethylsilanediol. CAS registry number: 1066-42-8.	135
5899916	Rhone-Poulenc, (1990). Environmental fate of D4 with cover letter.	136
6834101	Sousa, J. V., Mcnamara, P. C., Putt, A. E., Machado, M. W., Surprenant, D. C., Hamelink, J. L., Kent, D. J., Silberhorn, E. M., Hobson, J. F. (1995). Effects of octamethylcyclotetrasiloxane (OMCTS) on freshwater and marine organisms. Environmental Toxicology and Chemistry 14(10):1639-1647.	138
5889412	Springborn Laboratories, (1989). Octamethylcyclotetrasiloxane - determination of the water solubility in synthetic seawater.	140
5889414	Springborn Laboratories, (1989). Octamethylcyclotetrasiloxane - determination of the water solubility in freshwater.	141
7006395	Springborn Laboratories, (1989). Octamethylcyclotetrasiloxane – Determination of the water solubility in freshwater.	142
6982826	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.	143
7995923	U.S. EPA, (2021). Chemistry dashboard information for 1,3-Disiloxanediol, 1,1,3,3-tetramethyl-. CAS registry number: 1118-15-6.	144
7996867	U.S. EPA, (2021). Chemistry dashboard information for Dimethylsilanediol. CAS registry number: 1066-42-8.	146
6984031	Varaprath, S., Frye, C. L., Hamelink, J. (1996). Aqueous solubility of permethylsiloxanes (silicones). Environmental Toxicology and Chemistry 15(8):1263-1265.	148
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6835221	Liu, F., Beer, de, S., Ende, v.d., D., Mugele, F. (2013). Atomic force microscopy of confined liquids using the thermal bending fluctuations of the cantilever. Physical Review E (Statistical, Nonlinear, and Soft Matter Physics) 87(6):062406.	156
6982832	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.	157
3569075	Palczewska-Tulinska, M., Oracz, P. (2005). Selected physicochemical properties of hexamethylcyclotrisiloxane, octamethylcyclotetrasiloxane, and decamethylcyclopentasiloxane. Journal of Chemical and Engineering Data 50(5):1711-1719.	158
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7991715	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.	160
7992314	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.	161
7994661	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.	162
7995011	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.	163
6982969	Haynes, W.,M. (2014). Octamethylcyclotetrasiloxane. :3-424.	164
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6982970	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.	166
6982833	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.	167
4279677	Zhang, Y., Dong, H., Wu, C., Yu, L., Xu, J. (2015). The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures. Journal of Chemical Thermodynamics 81:16-25.	169
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10709359	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).	172
2803124	Hamelink, J. L., Simon, P. B., Silberhorn, E. M. (1996). Henry's law constant, volatilization rate, and aquatic half-life of octamethylcyclotetrasiloxane. Environmental Science & Technology 30(6):1946-1952.	182
7303416	Kochetkov, A., Smith, J. S., Ravikrishna, R., Valsaraj, K. T., Thibodeaux, L. J. (2001). Air-water partition constants for volatile methyl siloxanes. Environmental Toxicology and Chemistry 20(10):2184-2188.	183
6982832	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.	184
5889409	Services,, A.A., Inc., (2000). Phase II studies of the Henry's law constant of OMCTS (octamethylcyclotetrasiloxane).	186
5889489	Services,, A.A., Inc., (1990). Henry's law constant of OMCTS (octamethylcyclotetrasiloxane) at 20 degrees.	189

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2535012	Xu, S., Kropscott, B. (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12):2702-2710.	194
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6984075	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..	195
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9960764	Compton, K. L. (2019). Dietary biotransformation and bioaccumulation of cyclic siloxanes in rainbow trout (Oncorhynchus mykiss).	196
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7296376	SEHSC, (2020). Request for risk evaluation under the Toxic Substances Control Act; Octamethylcyclotetrasiloxane (D4; CASRN: 556-67-2).	197
2188633	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.	199
2535012	Xu, S., Kropscott, B. (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12):2702-2710.	203
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Study Citation:	DOE, (2016). Table 1: Chemicals of concern and associated chemical information. PACs.
OECD Harmonized Template:	Physical Form or State
HERO ID:	3981013

EXTRACTION

Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; not specified; not specified
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR Notes: NR
Results Value	liquid
Results Details	not specified

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance			
	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability			
	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other			
	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review; specific source not reported.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: primary reference not specified but include CRC (2009), HSDB (no date), Merck (2006), SAX (2012)

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.
OECD Harmonized Template:	Physical Form or State
HERO ID:	7994661

EXTRACTION	
Parameter	Data
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Value	3 values reported in Reaxys: 2 values were monoclinic crystal system (solid), 1 value was needle crystal shape (solid)
Results Details	Not Reported

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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* Related References: Hyde 1953; Kakudo et al. 1953; Kakudo et al 1953.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.
OECD Harmonized Template:	Physical Form or State
HERO ID:	7995011

EXTRACTION	
Parameter	Data
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Value	2 values reported in Reaxys; crystal phase - interplanar spacing and leafs
Results Details	Not Reported

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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* Related References: Hyde; Journal of the American Chemical Society; vol. 75; (1953); p. 2166

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Physical Form or State
HERO ID:	6982832

EXTRACTION

Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Value	oily liquid
Results Details	Not Reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance			
	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability			
	Metric 3: Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4: Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other			
	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Physical Form or State
HERO ID:	6982832

EXTRACTION

Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Value	smooth, viscous liquid
Results Details	Not Reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4: Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Lewis, R.J. Sr.; Hawley's Condensed Chemical Dictionary 15th Edition. John Wiley & Sons, Inc. New York, NY 2007., p. 918

Study Citation:	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.
OECD Harmonized Template:	Physical Form or State
HERO ID:	6982970

EXTRACTION

Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Value	liquid
Results Details	Not Reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance			
	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability			
	Metric 3: Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4: Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other			
	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Physical Form or State
HERO ID:	6982833

EXTRACTION	
Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Value	liquid
Results Details	Not Reported

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: OU Chemical Safety Data

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.
OECD Harmonized Template:	Physical Form or State
HERO ID:	7994661

EXTRACTION

Parameter	Data
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details	1 property reported in Reaxys: color - white.

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4: Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Lucas; Martin; Journal of the American Chemical Society; vol. 74; (1952); p. 5225, View in Reaxys; GmelinHandbuch der Anorganischen Chemie; vol. Si: MVol.C; 91, page 248 - 251 ; (from Gmelin)

Study Citation:	Fuller, J., White, D., Yi, H., Colley, J., Vickery, Z., Liu, S. (2020). Analysis of volatile compounds causing undesirable odors in a polypropylene - high-density polyethylene recycled plastic resin with solid-phase microextraction. Chemosphere 260:127589.			
OECD Harmonized Template:	Physical Form or State			
HERO ID:	6834323			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	no; Fisher Scientific (Waltham, MA, USA); NR; NR			
Results Details	D4 does not have an odor. [qualitative description that was not the focus of the primary source]			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	The odor intensity was determined qualitatively by pretrained people based on a 1 to 10 scale.
	Metric 4:	Reliability/Analytical Method	Low	Odor assessment was not the focus of the primary study, and only qualitative determination was used.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Medium		

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Physical Form or State			
HERO ID:	6982832			
EXTRACTION				
Parameter	Data			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Results Details	dry powder; liquid			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	Uninformative	Measured data are not consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors. It is not likely to be a powder with a melting point of 18°C.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Uninformative		

* Related References: EPA Chemicals under the TSCA

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Physical Form or State
HERO ID:	6982832

EXTRACTION

Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details	colorless, oily liquid

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance			
	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability			
	Metric 3: Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4: Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other			
	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: ILO International Chemical Safety Cards (ICSC)

Study Citation:	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.
OECD Harmonized Template:	Physical Form or State
HERO ID:	6982970

EXTRACTION	
Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details	oily liquid

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Physical Form or State
HERO ID:	6982833

EXTRACTION	
Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details	colorless liquid

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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* Related References: OU Chemical Safety Data

Study Citation:	Abbas, R., Schedemann, A., Ihmels, C., Enders, S., Gmehling, J. (2011). Measurement of thermophysical pure component properties for a few siloxanes used as working fluids for organic rankine cycles. Industrial and Engineering Chemistry Research 50(16):9748-9757.
OECD Harmonized Template:	Melting Point
HERO ID:	6835590

EXTRACTION

Parameter	Data
Melting Point	291.12 K
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	none; Experimental; None; differential scanning calorimeters ("DSC Q100")
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Wacker Chemie AG; Not Reported; >99.8%
Results Details Methods	Not Reported
Standard Deviation Results	Not Reported
Results Details	Not Reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) and/or other physical/chemical properties.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	DOE, (2016). Table 1: Chemicals of concern and associated chemical information. PACs.			
OECD Harmonized Template:	Melting Point			
HERO ID:	3981013			
EXTRACTION				
Parameter	Data			
Melting Point	17.5 - °C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; not specified; none			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR Notes: NR			
Results Details Methods	not reported			
Standard Deviation Results	not reported			
Results Details	not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review; specific source not reported.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: primary reference not specified but include CRC (2009), HSDB (no date), Merck (2006), SAX (2012)

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..
OECD Harmonized Template:	Melting Point
HERO ID:	6984075

EXTRACTION

Parameter	Data
Melting Point	17 - 18.5 °C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	17-18.5; 15 values were reported in Reaxys; 14 values were in the range of 17-18.5°C; 1 value was outside this range
Standard Deviation Results	Not reported
Results Details	15 values were reported in Reaxys; 14 values were in the range of 17-18.5°C; 1 value was outside this range.

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Data range determined from multiple primary sources in REAXYS.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.
OECD Harmonized Template:	Melting Point
HERO ID:	7991715

EXTRACTION

Parameter	Data
Melting Point	-5 °C
CASRN and Test Material	3081-07-0; Octamethyltetrasiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Zhurnal Obshchei Khimii; vol. 29; (1959); p. 258,261, 263; engl. Ausg. S. 262, 265, 266,

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.
OECD Harmonized Template:	Melting Point
HERO ID:	7992314

EXTRACTION	
Parameter	Data
Melting Point	-23 - -1.9 °C
CASRN and Test Material	3663-50-1; Hexamethyltrisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	2 values were reported in Reaxys.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Patent; Union Carbide; FR1399256; (1965); (A); Chem. Abstr.; vol. 63; nb. 16383e; (1965); Chem. Abstr.; vol. 63;nb. 16383e; (1965); Sokolow; Zhurnal Obshchei Khimii; vol. 29; (1959); p. 258,261, 263; engl. Ausg. S. 262, 265, 266,

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.
OECD Harmonized Template:	Melting Point
HERO ID:	7994661

EXTRACTION

Parameter	Data
Melting Point	62 - 68 °C
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	19 values were reported in Reaxys; 8 values were in the range of 62 - 68°C; one value was outside of this range (121 deg C); 9 values were reported with the test substance in a solvent

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Makarova et al. 2006; Lucas 1952; Cella et al. 1994; Cypryk et al. 1993; Lickiss et al. 1993; Zachernyuk et al. 1985; Lebedev et al. 1979; Martyakova et al. 1976; Baratova et al. 1975; Andrianov 1974; Ungurenasu 1961; Borisow et al. 1966; Barnes 19666....

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.
OECD Harmonized Template:	Melting Point
HERO ID:	7995011

EXTRACTION

Parameter	Data
Melting Point	94.5 - 101 °C
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	10 values were reported in Reaxys; The test substance was dissolved in a solvent for 6 values. Decomposition was reported at 99 - 100°C.

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Makarova et al. 2006; Kennan et al. 1999; Cella and Carpenter 1994; Harris 1963; Chrzczonowicz et al. 1960; Takiguchi 1959; Kantor 1953; Hyde 1953; Kantor 1953; Hyde 1953

Study Citation:	Haynes, W. M. (2014). 1,1,3,3-Tetramethyl-1,3-disiloxanediol. :3-506.
OECD Harmonized Template:	Melting Point
HERO ID:	7998725

EXTRACTION

Parameter	Data
Melting Point	66 °C
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

Study Citation:	Haynes, W.,M. (2014). Octamethylcyclotetrasiloxane. :3-424.
OECD Harmonized Template:	Melting Point
HERO ID:	6982969

EXTRACTION	
Parameter	Data
Melting Point	17.10 °C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High
	Metric 2:	Appropriateness	High
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium
	Metric 4:	Reliability/Analytical Method	Medium
Domain 3: Other	Metric 5:	Databases	High
	Metric 6:	Models	N/A

Overall Quality Determination

High

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Melting Point
HERO ID:	6982832

EXTRACTION

Parameter	Data
Melting Point	17.5 °C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: EPA DSSTox; Hazardous Substances Data Bank (HSDB); ILO International Chemical Safety Cards (ICSC)

Study Citation:	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.
OECD Harmonized Template:	Melting Point
HERO ID:	6982970

EXTRACTION	
Parameter	Data
Melting Point	17.5 °C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Melting Point
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Melting Point	17.5 °C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	Not Reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: OU Chemical Safety Data (No longer updated)

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Melting Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Melting Point	17.5 - 18 °C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Results Details Methods	Not Reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Jean-Claude Bradley Open Melting Point Dataset

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Melting Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Melting Point	17 - 18 °C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Results Details Methods	Not Reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Alfa Aesar

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Melting Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Melting Point	17 - 18 °C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Results Details Methods	Not Reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Oakwood

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Melting Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Melting Point	17 - 18 °C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Results Details Methods	Not Reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: LabNetwork

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Melting Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Melting Point	17 - 18 °C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Results Details Methods	Not Reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Sigma-Aldrich

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Melting Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Melting Point	17 - 18 °C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Results Details Methods	Not Reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Strem Product Catalog: <https://www.strem.com/catalog/v/14-5400/>

Study Citation:	SEHSC, (2020). Request for risk evaluation under the Toxic Substances Control Act; Octamethylcyclotetrasiloxane (D4; CASRN: 556-67-2).
OECD Harmonized Template:	Melting Point
HERO ID:	7296376

EXTRACTION

Parameter	Data
Melting Point	17.7 °C
CASRN and Test Material	556-67-2; Not Reported
Confidentiality, Type, and Guideline	Not Reported; Not Reported; Not Reported
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Results Details Methods	Not Reported
Standard Deviation Results	Not Reported
Results Details	Not Reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Source cited: HERO ID: 7289280 (duplicates: HERO ID: 7289281, HERO ID: 7330442; not in distiller) - EA09A Brooke D.N., Crookes M.J., Gray D., Robertson S. 2009. Environmental Risk Assessment Report: Octamethylcyclotetrasiloxane. UK Environmental Agency. Source cited: HERO ID: 6990635 (pending retrieval) - CSR18A Chemical Safety Report (CSR). 2018. Chemical safety report – octamethylcyclotetrasiloxane, D4. (CSR18A). Accessed December 2019. Available at: <https://echa.europa.eu/substanceinformation/-/substanceinfo/100.008.307>.

Study Citation:	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Melting Point
HERO ID:	6982826

EXTRACTION	
Parameter	Data
Melting Point	17.5 - 18.0 °C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Results Details Methods	average of 6 values; range 17.5-18.0°C
Standard Deviation Results	Not reported
Results Details	17.6°C average of 6 values

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Data range determined from multiple primary sources in Chemistry Dashboard.

Study Citation:	DOE, (2016). Table 1: Chemicals of concern and associated chemical information. PACs.
OECD Harmonized Template:	Boiling Point
HERO ID:	3981013

EXTRACTION	
Parameter	Data
Boiling Point	175 - C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; not specified; not specified
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR Notes: NR
Standard Deviation Results	not reported
Results Details	@ 760 mm Hg

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review; specific source not reported.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination **High**

* Related References: primary reference not specified but include CRC (2009), HSDB (no date), Merck (2006), SAX (2012)

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..
OECD Harmonized Template:	Boiling Point
HERO ID:	6984075

EXTRACTION

Parameter	Data
Boiling Point	170 - 176.4 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	750-760 torr; 28 values were reported in Reaxys; 19 of these values were reported in the range of 170 to 176.4°C at 750-760 torr; 9 values were outside this range or measured at unreported or non-standard pressures.

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Data range determined from multiple primary sources in REAXYS.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.
OECD Harmonized Template:	Boiling Point
HERO ID:	7991715

EXTRACTION

Parameter	Data
Boiling Point	97 - 100 C
CASRN and Test Material	3081-07-0; Octamethyltetrasiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	1 value reported in Reaxys at 2 torr

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Andrianov,K.A. et al.; Bulletin of the Academy of Sciences of the USSR Division of Chemical Science; (1962); p. 2144 - 2146; Izvestiya Akademii Nauk SSSR, Seriya Khimicheskaya;(1962); p. 2243 - 2245

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.			
OECD Harmonized Template:	Boiling Point			
HERO ID:	7991715			
EXTRACTION				
Parameter	Data			
Boiling Point	86 - 88 C			
CASRN and Test Material	3081-07-0; Octamethyltetrasiloxanediol			
Confidentiality, Type, and Guideline	None; Experimental; Not Reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Standard Deviation Results	Not reported			
Results Details	1 value reported in Reaxys at 0.4 torr			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Harris; Journal of the Chemical Society; (1963); p. 5978,5981.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.
OECD Harmonized Template:	Boiling Point
HERO ID:	7992314

EXTRACTION

Parameter	Data
Boiling Point	79 - 91 C
CASRN and Test Material	3663-50-1; Hexamethyltrisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	5 values were reported in Reaxys; 3 were in the range of 79 - 91 deg C at 2 - 3 torr; the other two were 106 deg C at 6 torr and 72 - 74 deg C at 0.3 torr.

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance. Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
	Metric 2: Appropriateness	High	
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Zachernyuk et al. 1985; Kaufman et al. 1970; Union Carbide Patent 1965; Harris 1963; Andrianov et al. 1962

Study Citation:	Haynes, W.,M. (2014). Octamethylcyclotetrasiloxane. :3-424.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982969

EXTRACTION	
Parameter	Data
Boiling Point	175.4 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982832

EXTRACTION

Parameter	Data
Boiling Point	175.8 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: EPA DSSTox

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982832

Parameter		EXTRACTION	
Boiling Point		74 C	
CASRN and Test Material		556-67-2; Octamethylcyclotetrasiloxane	
Confidentiality, Type, and Guideline		none; Experimental; Not reported	
Solvent, Reactivity, Storage, and Stability		NR; NR; NR; NR	
Radiolabel, Source, State, and Purity		NR; NR; NR; NR	
Standard Deviation Results		Not Reported	
Results Details		20 mm Hg	

Domain		EVALUATION	
Metric		Rating	Comments
Domain 1: Substance			
Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability			
Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other			
Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Boiling Point	175 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High
	Metric 2:	Appropriateness	High
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium
	Metric 4:	Reliability/Analytical Method	Medium
Domain 3: Other	Metric 5:	Databases	High
	Metric 6:	Models	N/A

Overall Quality Determination	High
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* Related References: O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255

Study Citation:	NIST, (2022). NIST Chemistry WebBook. Cyclotetrasiloxane, octamethyl- (556-67-2). Standard Reference Database No. 69.
OECD Harmonized Template:	Boiling Point
HERO ID:	10225718

EXTRACTION	
Parameter	Data
Boiling Point	446.2 - K
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	No; experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Standard Deviation Results	0.6 K
Results Details	Not Reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination **High**

* Related References: Myers, R.S.; Clever, H.L., Surface Tension of Octamethylcyclotetrasiloxane and Hexamethyldisilazane and Their Solutions with Carbon Tetrachloride and n-Hexadecane, J. Chem. Eng. Data, 1969, 14, 161-164.

Study Citation:	NIST, (2022). NIST Chemistry WebBook. Cyclotetrasiloxane, octamethyl- (556-67-2). Standard Reference Database No. 69.
OECD Harmonized Template:	Boiling Point
HERO ID:	10225718

EXTRACTION				
Parameter		Data		
Boiling Point		448 - 449 K		
CASRN and Test Material		556-67-2; D4		
Confidentiality, Type, and Guideline		No; experimental; Not Reported		
Solvent, Reactivity, Storage, and Stability		Not Reported; Not Reported; Not Reported; Not Reported		
Radiolabel, Source, State, and Purity		Not Reported; Not Reported; Not Reported; Not Reported		
Standard Deviation Results		Not Reported		
Results Details		Not Reported		
EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance		Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
		Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability		Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
		Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other		Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
		Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination **High**

* Related References: Citing PCR Inc., Research Chemicals Catalog 1990-1991, PCR Inc., Gainesville, FL, 1990, 1.

Study Citation:	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982970

EXTRACTION

Parameter	Data
Boiling Point	175 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	STP

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982970

Parameter		EXTRACTION			
Boiling Point		74 C			
CASRN and Test Material		556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline		none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability		NR; NR; NR; NR			
Radiolabel, Source, State, and Purity		NR; NR; NR; NR			
Standard Deviation Results		Not reported			
Results Details		20 mm Hg			
Domain		EVALUATION			
Metric		Rating		Comments	
Domain 1: Substance		Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
		Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability		Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
		Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other		Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
		Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination
High

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982833

EXTRACTION

Parameter	Data
Boiling Point	176 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: OU Chemical Safety Data (No longer updated)

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Boiling Point	175 - 176 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Strem Product Catalog: <https://www.strem.com/catalog/v/14-5400/>

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Boiling Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Boiling Point	175 - 176 C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Alfa Aesar

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Boiling Point	175 - 176 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Oakwood

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Boiling Point	175 - 176 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	Not reported

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: LabNetwork

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Boiling Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Boiling Point	175 - 176 C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Sigma-Aldrich

Study Citation:	SEHSC, (2020). Request for risk evaluation under the Toxic Substances Control Act; Octamethylcyclotetrasiloxane (D4; CASRN: 556-67-2).
OECD Harmonized Template:	Boiling Point
HERO ID:	7296376

EXTRACTION	
Parameter	Data
Boiling Point	175.5 - 175.6 C
CASRN and Test Material	556-67-2; Not Reported
Confidentiality, Type, and Guideline	Not Reported; Not Reported; Not Reported
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Standard Deviation Results	Not Reported
Results Details	Not Reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High
	Metric 2:	Appropriateness	High
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium
	Metric 4:	Reliability/Analytical Method	Low
Domain 3: Other	Metric 5:	Databases	Medium
	Metric 6:	Models	N/A

Overall Quality Determination

Medium

* Related References: Source cited: HERO ID: 7002467 (pending retrieval) - IUCLID. 2005. IUCLID Dataset for Octamethylcyclotetrasiloxane. Willington, CT: Epona Associates LLC. Source cited not in HERO - IUCLID. 2000. IUCLID Dataset for Octamethylcyclotetrasiloxane. Year 2000 CD-ROM Edition. Ispra: European Chemicals Bureau, European Commission. Source cited: HERO ID: 7289280 (duplicates: HERO ID: 7289281, HERO ID: 7330442) - EA09A Brooke D.N., Crookes M.J., Gray D., Robertson S. 2009. Environmental Risk Assessment Report: Octamethylcyclotetrasiloxane. UK Environmental Agency. Source cited: HERO ID: 6990635 (pending retrieval) - CSR18A Chemical Safety Report (CSR). 2018. Chemical safety report – octamethylcyclotetrasiloxane, D4. (CSR18A). Accessed December 2019. Available at: <https://echa.europa.eu/substanceinformation/-/substanceinfo/100.008.307>. Not in HERO - Chandra 1997 Chandra, G. 1997. Organosilicon Materials. The Handbook of Environmental Chemistry, Volume 3 Anthropogenic Compounds, Part H. Berlin: Springer-Verlag. HERO ID: 10229968 - Merck. 1996. The MERCK Index. An Encyclopedia of Chemicals, Drugs, and Biologicals, 12th Edn. Whitehouse Station, NJ. MERCK and CO. Inc. HERO ID: 7002242 (pending retrieval) - OECD. 1995. Draft SIDS Dossier on Octamethylcyclotetrasiloxane. 20 June 1995. Paris: OECD.

Study Citation:	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Boiling Point
HERO ID:	6982826

EXTRACTION

Parameter	Data
Boiling Point	176 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Standard Deviation Results	Not reported
Results Details	176 deg C average of 4 values

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Data range determined from multiple primary sources in ChemDashBoard.

Study Citation:	DOE, (2016). Table 1: Chemicals of concern and associated chemical information. PACs.			
OECD Harmonized Template:	Density			
HERO ID:	3981013			
EXTRACTION				
Parameter	Data			
Density	0.9558 -			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; not specified; not specified			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR Notes: NR			
Density Type	specific gravity (density of a substance divided by the density of water)			
System	not specified			
Temperature	25°C			
Standard Deviation Results	not reported			
Results Details	not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review; specific source not reported.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: primary reference not specified but include CRC (2009), HSDB (no date), Merck (2006), SAX (2012)

Study Citation:	NIST, (2022). NIST Chemistry WebBook. Cyclotetrasiloxane, octamethyl- (556-67-2). Standard Reference Database No. 69.
OECD Harmonized Template:	Density
HERO ID:	10225718

EXTRACTION	
Parameter	Data
Density	0.995 - mol/l
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	no; experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Density Type	density
System	Not Reported
Temperature	Not Reported
Standard Deviation Results	0.00991 mol/l
Results Details	Reported as critical density

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Cited from McLure, I.A.; Neville, J.F., The critical temperatures and pressures of hexamethyldisilomethylene, octamethylcyclotetrasiloxane, and decamethylcyclpentasiloxane, J. Chem. Thermodyn., 1982, 14, 385-8.

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..
OECD Harmonized Template:	Density
HERO ID:	6984075

EXTRACTION	
Parameter	Data
Density	0.9497 - 0.9568 g/cm3
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not Reported
Standard Deviation Results	Not reported
Results Details	47 values were reported in Reaxys; 21 values were reported in the range of 0.9497 to 0.9568 at 19.99-25°C; 26 values were outside this range or measured at unreported or non-standard temperatures.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Data range determined from multiple primary sources in REAXYS.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.
OECD Harmonized Template:	Density
HERO ID:	7991715

EXTRACTION

Parameter	Data
Density	0.9881 - 0.9886 g/cm3
CASRN and Test Material	3081-07-0; Octamethyltetrasiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not Reported
Standard Deviation Results	Not reported
Results Details	2 values reported in Reaxys; reference temperature 4°C, measurement temperature 20°C

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Andrianov,K.A. et al.; Bulletin of the Academy of Sciences of the USSR Division of Chemical Science; (1962); p.2144 - 2146; Sokolow; Zhurnal Obshchei Khimii; vol. 29; (1959); p. 258,261, 263; engl. Ausg. S. 262, 265, 266

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.
OECD Harmonized Template:	Density
HERO ID:	7992314

EXTRACTION

Parameter	Data
Density	0.991 - 1.0127 g/cm3
CASRN and Test Material	3663-50-1; Hexamethyltrisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not Reported
Standard Deviation Results	Not reported
Results Details	5 values were reported in Reaxys in the range of 0.991 - 1.0127 g/cm3, at 20-25°C (reference temperature 4°C)

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Voronkov et al. 1970; Kaufman and Karlin 1970; Union Carbide Patent 1965; Andrianov et al. 1962; Sokolow 1959.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.
OECD Harmonized Template:	Density
HERO ID:	7994661

EXTRACTION	
Parameter	Data
Density	1.08 - 1.15 g/cm3
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not Reported
Standard Deviation Results	Not reported
Results Details	4 values reported in reaxys; 2 values were 1.118 g/cm3 at 16°C; 2 values did not have measurement temperatures. Crystallographic density.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination **High**

* Related References: Lickiss et al. 1993; Hyde 1953; Kakudo et al. 1953; Kakudo et al 1953.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.
OECD Harmonized Template:	Density
HERO ID:	7995011

EXTRACTION

Parameter	Data
Density	1.095 - 1.099 g/cm3
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not Reported
Standard Deviation Results	Not reported
Results Details	1 value was reported in Reaxys

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Hyde; Journal of the American Chemical Society; vol. 75; (1953); p. 2166

Study Citation:	Haynes, W. M. (2014). 1,1,3,3-Tetramethyl-1,3-disiloxanediol. :3-506.			
OECD Harmonized Template:	Density			
HERO ID:	7998725			
EXTRACTION				
Parameter	Data			
Density	1.095 g/cm3			
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	None; Experimental; Not Reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	25°C			
Standard Deviation Results	Not reported			
Results Details	Not Reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Haynes, W.,M. (2014). Octamethylcyclotetrasiloxane. :3-424.			
OECD Harmonized Template:	Density			
HERO ID:	6982969			
EXTRACTION				
Parameter	Data			
Density	0.9561 g/cm3			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not Reported			
Standard Deviation Results	Not reported			
Results Details	20°C			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Density			
HERO ID:	6982832			
EXTRACTION				
Parameter	Data			
Density	0.96			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not Reported			
Standard Deviation Results	Not reported			
Results Details	relative density: water = 1			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: ILO International Chemical Safety Cards (ICSC)

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Density
HERO ID:	6982832

Parameter	Data
Density	0.9558 units not given
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not Reported
Standard Deviation Results	Not reported
Results Details	Not reported

Domain	Metric	EVALUATION Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Units not reported but expected to be g/cm3 based on primary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination High

* Related References: O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 1255

Study Citation:	O’Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.			
OECD Harmonized Template:	Density			
HERO ID:	6982970			
EXTRACTION				
Parameter	Data			
Density	0.9558			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not Reported			
Standard Deviation Results	Not reported			
Results Details	units not given			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Palczewska-Tulinska, M., Oracz, P. (2005). Selected physicochemical properties of hexamethylcyclotrisiloxane, octamethylcyclotetrasiloxane, and decamethylcyclopentasiloxane. Journal of Chemical and Engineering Data 50(5):1711-1719.
OECD Harmonized Template:	Density
HERO ID:	3569075

EXTRACTION	
Parameter	Data
Density	0.95755 g/cm ³
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	no; 99% dried over sieves, rectified, refluxed then collected at a ratio of 1:30.; Liquid; 99.98%
Temperature	292.00 K
Standard Deviation Results	±0.14 σ (p/kg-m ³)
Results Details	reported as 957.55 kg/m ³ at 292.00 K; 957.55-790.24 kg/m ³ at 292.00 to 433.15 K

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Density
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Density	0.956 g/cm3
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not Reported
Standard Deviation Results	Not reported
Results Details	reported as 0.956 g/mL

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Alfa Aesar

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Density			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Density	0.956 g/cm3			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not Reported			
Standard Deviation Results	Not reported			
Results Details	reported as 0.956 g/mL			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Oakwood

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Density			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Density	0.956 g/cm3			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not Reported			
Standard Deviation Results	Not reported			
Results Details	reported as 0.956 g/mL			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Sigma-Aldrich

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Density			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Density	0.956 g/cm3			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not Reported			
Standard Deviation Results	Not reported			
Results Details	reported as 0.956 g/mL			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Fluorochem

Study Citation:	RSC, (2021). ChemSpider: Dimethylsilanediol.			
OECD Harmonized Template:	Density			
HERO ID:	7999339			
EXTRACTION				
Parameter	Data			
Density	0.97 g/mL			
CASRN and Test Material	1066-42-8; Dimethylsilanediol			
Confidentiality, Type, and Guideline	None; Experimental; Not Reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not Reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	Medium	Data is from a publicly available secondary source with references to non-peer reviewed original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination			Medium	

* Related References: Alfa Aesar

Study Citation:	Zhang, Y., Dong, H., Wu, C., Yu, L., Xu, J. (2015). The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures. Journal of Chemical Thermodynamics 81:16-25.
OECD Harmonized Template:	Density
HERO ID:	4279677

EXTRACTION	
Parameter	Data
Density	0.95603 g/cm3
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	no; Dow Corning; Liquid; 0.995 mass fraction Notes: measured by Gas and Liquid Chromatography.
Temperature	293.15 K
Standard Deviation Results	Not reported
Results Details	Reported as 0.95603 g/cm3 measured at 293.15 K and atmospheric pressure, 102.355 ± 0.020 kPa

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

Study Citation:	Compton, K. L. (2019). Dietary biotransformation and bioaccumulation of cyclic siloxanes in rainbow trout (Oncorhynchus mykiss).			
OECD Harmonized Template:	Vapor Pressure			
HERO ID:	9960764			
EXTRACTION				
Parameter	Data			
Vapor Pressure	1.05 - mm Hg			
CASRN and Test Material	556-67-2; D4			
Confidentiality, Type, and Guideline	No; Not specified; Not reported			
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported			
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Not reported			
Temperature	Not reported			
System	Not reported			
Standard Deviation Results	Not reported			
Results Details	Not Reported			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The data reported is consistent with the chemicals physical and chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.
Overall Quality Determination		Medium		

Study Citation:	Corning,, Dow (2014). Non-regulated study: DMSD environmental modeling using SIMPLETREAT and QWASI.			
OECD Harmonized Template:	Vapor Pressure			
HERO ID:	9644522			
EXTRACTION				
Parameter	Data			
Vapor Pressure	>/= 18.1 - Pa			
CASRN and Test Material	1066-42-8; dimethylsilanediol			
Confidentiality, Type, and Guideline	No; Estimated; Not reported			
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported			
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Not reported			
Temperature	25 deg C			
System	Not reported			
Standard Deviation Results	Not reported			
Results Details	citing U.S. Environmental Protection Agency, 2010. Boiling Pt, Melting Pt, Vapor Pressure Estimations (MPBPWIN v1.42), s.l.: s.n.			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	Low	The model endpoint is outdated and the data are not useful or reproducible.
Overall Quality Determination		Medium		

* Related References: Citing U.S. Environmental Protection Agency, 2010. Boiling Pt, Melting Pt, Vapor Pressure Estimations (MPBPWIN v1.42), s.l.: s.n. (No HERO ID)

Study Citation:	Flaningam, O. L. (1986). Vapor pressures of poly(dimethylsiloxane) oligomers. Journal of Chemical and Engineering Data 31(3):266-272.			
OECD Harmonized Template:	Vapor Pressure			
HERO ID:	6989156			
EXTRACTION				
Parameter	Data			
Vapor Pressure	>= 5.36 - ≤ 133.26 kPa			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; non-guideline			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; obtained from distillations of plant cyclics through a high-efficiency distillation column; NR; Not specified Notes: D4			
Temperature	361.71-459.65 K			
System	Vapor pressures measured in an ebulliometer over the pressure range of 7-133 kPa; experimental data fit for Antoine equation and constants A, B, and C			
Standard Deviation Results	temperature measurement readings to the nearest 0.01K			
Results Details	T(K); measured VP (kPa); calculated VP (kPa);361.71; 5.36; 5.35 366.76; 6.69; 6.69 376.41; 10.02; 10.02 383.69; 13.35; 13.35 394.63; 20.00; 19.99 402.94; 26.65; 26.66 424.99; 53.25; 53.26432.78; 66.65; 66.55439.46; 79.92; 79.91448.53; 101.29; 101.31455.29; 119.96; 119.95459.65; 133.26; 133.31415.46; 39.94; 39.9			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	Data are obtained by accepted standard analytical methods.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Medium		

Study Citation:	Kochetkov, A., Smith, J. S., Ravikrishna, R., Valsaraj, K. T., Thibodeaux, L. J. (2001). Air-water partition constants for volatile methyl siloxanes. Environmental Toxicology and Chemistry 20(10):2184-2188.
OECD Harmonized Template:	Vapor Pressure
HERO ID:	7303416

EXTRACTION	
Parameter	Data
Vapor Pressure	0.121 - kPa
CASRN and Test Material	Not Reported; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Extrapolated; NR
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR Notes: NR
Temperature	299-301K
System	NR
Standard Deviation Results	NR
Results Details	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other (peer-reviewed) secondary source.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Citing HERO ID 6990705 or correlated using American Institute of Chemical EngineersDIPPR equation HERO ID: 6989156

Study Citation:	Lei, Y. D., Wania, F., Mathers, D.,an (2010). Temperature-Dependent Vapor Pressure of Selected Cyclic and Linear Polydimethylsiloxane Oligomers. Journal of Chemical and Engineering Data 55(12):5868-5873.
OECD Harmonized Template:	Vapor Pressure
HERO ID:	2629388

EXTRACTION	
Parameter	Data
Vapor Pressure	92.8 - 124.5 Pa
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	HPLC grade hexane; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; Dow Corning Corporation (Midland, MI); Liquid; NR
Temperature	298.15 K
System	Gas chromatographic retention time (GCRT) technique P(GC) and Liquid state vapor pressure P(L)
Standard Deviation Results	P(L) $\pm$ 6.2 Pa; P(GC) $\pm$ 0.9
Results Details	P(GC) = 92.8 $\pm$ 0.9 Pa; P(L) 124.5 $\pm$ 6.2 Pa at 298.15 K. Temperature ranges of retention time measurements 308.15-368.15 K.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Vapor Pressure
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Vapor Pressure	1.05 torr
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	25°C
System	Not reported
Standard Deviation Results	Not reported
Results Details	reported as 1.05 mm Hg

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use or includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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* Related References: EPA DSSTox; Hazardous Substances Data Bank (HSDB)

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Vapor Pressure
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Vapor Pressure	133.3 Pa
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	21.7°C
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: ILO International Chemical Safety Cards (ICSC)

Study Citation:	NIST, (2022). NIST Chemistry WebBook. Cyclotetrasiloxane, octamethyl- (556-67-2). Standard Reference Database No. 69.
OECD Harmonized Template:	Vapor Pressure
HERO ID:	10225718

EXTRACTION	
Parameter	Data
Vapor Pressure	56.1 - kJ/mol
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	No; experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	303-428 K
System	Not Reported
Standard Deviation Results	Not Reported
Results Details	Isoteniscope also noted under enthalpy of vaporization as 48.5 kJ/mol at 373 K and 45.6 kJ/mol at 398 K.

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate OR the analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Cited from Osthoff, Robert C.; Grubb, W.T., Physical Properties of Organosilicon Compounds. III. Thermodynamic Properties of Octamethylcyclotetrasiloxane, J. Am. Chem. Soc., 1954, 76, 2, 399-401, <https://doi.org/10.1021/ja01631a025>.

Study Citation:	NIST, (2022). NIST Chemistry WebBook. Cyclotetrasiloxane, octamethyl- (556-67-2). Standard Reference Database No. 69.		
OECD Harmonized Template:	Vapor Pressure		
HERO ID:	10225718		
EXTRACTION			
Parameter	Data		
Vapor Pressure	47.6 - kJ/mol		
CASRN and Test Material	556-67-2; D4		
Confidentiality, Type, and Guideline	No; experimental; Not Reported		
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported		
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported		
Temperature	376 K		
System	Not Reported		
Standard Deviation Results	Not Reported		
Results Details	Ebulliometer; based on data from 361-469 K.		
EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate OR the analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High	

* Related References: Cited from Flaningam, Ora L., Vapor pressures of poly(dimethylsiloxane) oligomers, J. Chem. Eng. Data, 1986, 31, 3, 266-272, <https://doi.org/10.1021/je00045a002>.

Study Citation:	NIST, (2022). NIST Chemistry WebBook. Cyclotetrasiloxane, octamethyl- (556-67-2). Standard Reference Database No. 69.			
OECD Harmonized Template:	Vapor Pressure			
HERO ID:	10225718			
EXTRACTION				
Parameter	Data			
Vapor Pressure	57.0 - kJ/mol			
CASRN and Test Material	556-67-2; D4			
Confidentiality, Type, and Guideline	No; experimental; Not Reported			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	Not Reported			
System	Not Reported			
Standard Deviation Results	0.8 kJ/mol			
Results Details	Calorimetry			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties (e.g., if the physical state is described as a liquid, the substance should have a melting point below 25°C and a boiling point above 25°C) or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate OR the analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Cited from Voronkov, M.G.; Klyuchnikov, V.A.; Mironenko, E.V.; Shvets, G.N.; Danilova, T.F.; Khudobin, Yu.I., Thermochemistry of organosilicon compounds, Journal of Organometallic Chemistry, 1991, 406, 1-2, 91-97, [https://doi.org/10.1016/0022-328X\(91\)83174-3](https://doi.org/10.1016/0022-328X(91)83174-3) .

Study Citation:	NIST, (2022). NIST Chemistry WebBook. Cyclotetrasiloxane, octamethyl- (556-67-2). Standard Reference Database No. 69.			
OECD Harmonized Template:	Vapor Pressure			
HERO ID:	10225718			
EXTRACTION				
Parameter	Data			
Vapor Pressure	44.1 - kJ/mol			
CASRN and Test Material	556-67-2; D4			
Confidentiality, Type, and Guideline	No; experimental; Not Reported			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	378 K			
System	Not Reported			
Standard Deviation Results	Not Reported			
Results Details	Based on data from 334-423 K			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties (e.g., if the physical state is described as a liquid, the substance should have a melting point below 25°C and a boiling point above 25°C) or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate OR the analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Cited from Ditsent, V.E.; Skorokhodov, I.I.; Terent'eva, N.A.; Zolotareva, M.N., Russ. J. Phys. Chem., 1971, 45, 6, 901.

Study Citation:	SEHSC, (2020). Request for risk evaluation under the Toxic Substances Control Act; Octamethylcyclotetrasiloxane (D4; CASRN: 556-67-2).
OECD Harmonized Template:	Vapor Pressure
HERO ID:	7296376

EXTRACTION	
Parameter	Data
Vapor Pressure	132 - Pa
CASRN and Test Material	556-67-2; Not Reported
Confidentiality, Type, and Guideline	Not Reported; Not Reported; Not Reported
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	25C
System	Not Reported
Standard Deviation Results	Not Reported
Results Details	Additional values from multiple sources noted: 82–96 Pa at 20°C or 132–139 Pa at 25°C

		EVALUATION		Comments
Domain	Metric	Rating		
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

Medium

* Related References: Source cited: Not in HERO - Chandra 1997 Chandra, G. 1997. Organosilicon Materials. The Handbook of Environmental Chemistry, Volume 3 Anthropogenic Compounds, Part H. Berlin: Springer-Verlag. Source cited: HERO ID: 7289280 (duplicates: HERO ID: 7289281, HERO ID: 7330442) - EA09A Brooke D.N., Crookes M.J., Gray D., Robertson S. 2009. Environmental Risk Assessment Report: Octamethylcyclotetrasiloxane. UK Environmental Agency. Source cited: HERO ID: 7002467 (pending retrieval) - IUCLID. 2005. IUCLID Dataset for Octamethylcyclotetrasiloxane. Willington, CT: Epona Associates LLC. Source cited: HERO ID: 6990635 (pending retrieval) - CSR18A Chemical Safety Report (CSR). 2018. Chemical safety report – octamethylcyclotetrasiloxane, D4. (CSR18A). Accessed December 2019. Available at: <https://echa.europa.eu/substanceinformation/-/substanceinfo/100.008.307>.

Study Citation:	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Vapor Pressure
HERO ID:	6982826

EXTRACTION	
Parameter	Data
Vapor Pressure	1.05 torr
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
Standard Deviation Results	Not reported
Results Details	reported as 1.05 mm Hg

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a recognized, peer-reviewed data collection.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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* Related References: PhysProp

Study Citation:	Compton, K. L. (2019). Dietary biotransformation and bioaccumulation of cyclic siloxanes in rainbow trout (Oncorhynchus mykiss).			
OECD Harmonized Template:	logKow			
HERO ID:	9960764			
EXTRACTION				
Parameter	Data			
log k _{ow}	6.49 -			
CASRN and Test Material	556-67-2; D4			
Confidentiality, Type, and Guideline	No; Not specified; Not reported			
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported			
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Not reported			
Temperature	Not reported			
System	Not reported			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	Not reported			
Results Details	Not Reported			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The data reported is consistent with the chemicals physical and chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.
Overall Quality Determination		Medium		

* Related References: Citing [EC and HC 2008b]. Environment Canada and Health Canada. November 2008. Screening assessment for the challenge: octamethylcyclotetrasiloxane (D4), chemical abstracts service registry number 556-67-2. November 2008. (HERO ID 6993847)

Study Citation:	Corning,, Dow (1987). The n-octanol/water partition coefficient of octamethylcyclotetrasiloxane with attachment and cover letter dated 092987.
OECD Harmonized Template:	logKow
HERO ID:	5905948

EXTRACTION	
Parameter	Data
log k_{ow}	5.10
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; >99.5%
Temperature	Not reported
System	100 uL (0.0956 g) D4 in 25 g (30.23 mL) octanol placed in a 250 mL wheatman bottle with 150 mL distilled water. The bottle was capped, agitated for an hour on a Burrell wrist-action shaker, and allowed to settle overnight.
pH	Not reported
Results Details Method	Aqueous samples extracted with hexane prior to analysis by GC with FID detector and Carbowax 20M capillary column; LOD=10 ppb
Standard Deviation Results	Not reported
Results Details	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups).
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	Methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytic methods.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Corning,, Dow (1982). Subject: Monthly summary 10/1982, octanol-water coefficients.			
OECD Harmonized Template:	logKow			
HERO ID:	7310176			
EXTRACTION				
Parameter	Data			
log k _{ow}	3.7 - 4.0			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not Reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	unspecified internal standard; Dow Corning Corp., Midland, MI; NR; >99%			
Temperature	not reported			
System	OECD classical partitioning between 50 mL octanol and 250 mL water			
pH	not reported			
Results Details Method	FID-GLC			
Standard Deviation Results	not reported			
Results Details	Replicate 1: average concentration in aqueous phase was 237 ppb; average concentration in octanol was 395 ppm. Replicate 2: average concentration in aqueous phase was 358 ppb and concentration in octanol was 580 ppm.			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Low	Lacking method details for adequate study interpretation.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Low		

Study Citation:	Corning,, Dow (2014). Non-regulated study: DMSD environmental modeling using SIMPLETREAT and QWASI.			
OECD Harmonized Template:	logKow			
HERO ID:	9644522			
EXTRACTION				
Parameter	Data			
log k _{ow}	-0.38 -			
CASRN and Test Material	1066-42-8; dimethylsilanediol			
Confidentiality, Type, and Guideline	no; not specified; Not reported			
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported			
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Not reported			
Temperature	20 degrees C			
System	Not reported			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	Not reported			
Results Details	Cited study reports an average log kow value of -0.41+/-0.10 in Table 2			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The data is consistent with the chemicals other physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.
Overall Quality Determination		Medium		

* Related References: Citing Xu, S. & Kropscott, B., 2012. Method for Simultaneous Determination of Partition Coefficients for Cyclic Volatile Methylsiloxanes and Dimethylsilanediol. Anal. Chem., 84(4), pp. 1948-1955. (HERO ID 2188633)

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).
OECD Harmonized Template:	logKow
HERO ID:	10709359

EXTRACTION	
Parameter	Data
log k_{ow}	2.512 -
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	35°C
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace
pH	NR
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer
Standard Deviation Results	0.165
Results Details	standard error=0.058

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).
OECD Harmonized Template:	logKow
HERO ID:	10709359

EXTRACTION	
Parameter	Data
log k_{ow}	2.391 -
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	27°C
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace
pH	NR
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer
Standard Deviation Results	0.112
Results Details	standard error=0.039

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k_{ow}	2.369 -			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	20°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	0.104			
Results Details	standard error=0.024			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k _{ow}	2.125 -			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	12°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	0.249			
Results Details	Standard error=0.083			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k_{ow}	0.926 -			
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	12°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	0.035			
Results Details	Standard error=0.012; Condensation products (ex. dimethylsiloxane- α,ω -diols) were detected, quantified, and the concentrations were reported in HERO ID 9644512			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k_{ow}	1.099 -			
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	35°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	0.025			
Results Details	Standard error=0.009; Condensation products (ex. dimethylsiloxane- α,ω -diols) were detected, quantified, and the concentrations were reported in HERO ID 9644512			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k _{ow}	2.381 -			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; calculated; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	25°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	Not Reported			
Results Details	standard error=0.170; Values were calculated using temperature dependence parameters from linear regressions of log K on 1/T (K^-1). Condensation products (ex. dimethylsiloxane- α,ω -diols) were detected, quantified, and the concentrations were reported in HERO ID 9644512.			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k _{ow}	1.018 -			
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	No; calculated; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	25°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	Not Reported			
Results Details	standard error=0.038; Values were calculated using temperature dependence parameters from linear regressions of log K on 1/T (K^-1). Condensation products (ex. dimethylsiloxane- α,ω -diols) were detected, quantified, and the concentrations were reported in HERO ID 9644512.			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k_{ow}	1.036 -			
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	27°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	0.042			
Results Details	Standard error=0.015; Condensation products (ex. dimethylsiloxane- α,ω -diols) were detected, quantified, and the concentrations were reported in HERO ID 9644512			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	logKow			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
log k_{ow}	0.962 -			
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	20°C			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
pH	NR			
Results Details Method	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
Standard Deviation Results	0.049			
Results Details	standard error=0.011; Condensation products (ex. dimethylsiloxane- α,ω -diols) were detected, quantified, and the concentrations were reported in HERO ID 9644512			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..
OECD Harmonized Template:	logKow
HERO ID:	6984075

EXTRACTION	
Parameter	Data
log k_{ow}	6.98
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	21.6-21.7°C
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	4 data points were reported in Reaxys; 2 of these values were reported as 6.98 at 21.6-21.7°C; 2 data points were measured at unreported temperatures.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Data range determined from multiple primary sources in REAXYS.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.
OECD Harmonized Template:	logKow
HERO ID:	7995011

EXTRACTION	
Parameter	Data
log k_{ow}	-0.41
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20.1
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	1 value reported in Reaxys.

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Xu, Shihe; Kropscott, Bruce; Analytical Chemistry; vol. 84; nb. 4; (2012); p. 1948 - 1955

Study Citation:	Kozerski, G., Shawl, H. (2007). Determination of the 1-octanol/water partition coefficient of octamethylcyclotetrasiloxane (D4) by the slow-stirring method using gas chromatography.
OECD Harmonized Template:	logKow
HERO ID:	6987895

EXTRACTION	
Parameter	Data
log k_{ow}	6.488
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Draft OECD Guideline - Slow Stir Method
Solvent, Reactivity, Storage, and Stability	NR; NR; General storage conditions reported: Room temperature or refrigerated: may also store frozen; keep away from sparks and open flame and heat; NR
Radiolabel, Source, State, and Purity	No; Dow Corning Corporation; Colorless liquid; 99.77±0.002 area percent purity Notes: Commercial product Dow Corning 244 Fluid; D4
Temperature	25.1°C
System	Slow-Stirring Method Using Gas Chromatography and Mass Spectrometry
pH	Not reported
Results Details Method	Aqueous samples: headspace solvent micro-extraction, LOQ: 0.06 ng/mL COV 3.2%; 1-octanol samples: GC-FID, COV 0.53%
Standard Deviation Results	±0.017
Results Details	at equilibrium

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

Study Citation:	Kurume Laboratory, (2021). Determination of the n-octanol/water Partition Coefficient of DHDMS (HPLC method).
OECD Harmonized Template:	logKow
HERO ID:	9953733

EXTRACTION	
Parameter	Data
log k_{ow}	< 0.3 -
CASRN and Test Material	1066-42-8; Dihydroxydimethylsilane (DHDMS)
Confidentiality, Type, and Guideline	No; Experimental; OECD Guidelines for Testing of Chemicals, No.117, April 13, 2004, "Partition Coefficient (n-octanol/water), High Performance Liquid Chromatography (HPLC) Method"
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Prepared by the hydrolysis of simethoxydimethylsilane (CASRN 1112-39-6, supplied by the Sponsor, purity>99.9%
Temperature	25 +/- 1 degrees C
System	Not reported
pH	Not reported
Results Details Method	High performance liquid chromatograph: Hitachi L-6200 Detector: Shimadzu RID-10A
Standard Deviation Results	Not reported
Results Details	Reported as log pow <0.2 (on page 4) and <0.3 (on page 3); the partition coefficient of DHDMS is less than that of 2-Butanone, which is 0.3, since the retention time of DHDMS was less than 2-butanone.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The data is consistent with the chemicals physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.

Overall Quality Determination

High

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	logKow
HERO ID:	6982832

EXTRACTION	
Parameter	Data
log k_{ow}	6.74
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	average of three measurements

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use or includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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* Related References: Xu S et al; Environ Sci Technol 48: 11748-11759 (2014)

Study Citation:	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	logKow			
HERO ID:	6982826			
EXTRACTION				
Parameter	Data			
log k_{ow}	6.74			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not reported			
System	Not reported			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical’s physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Physprop

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.
OECD Harmonized Template:	logKow
HERO ID:	2188633

EXTRACTION	
Parameter	Data
log k_{ow}	-0.41
CASRN and Test Material	Not Reported; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; double-syringe apparatus
Solvent, Reactivity, Storage, and Stability	NR; Not Reported; NR; NR
Radiolabel, Source, State, and Purity	^{14}C -dimethylsilanediol (^{14}C -DMSD); specific activity 522.4 mCi/g; Dow Corning; NR; 98% Notes: value is radiochemical purity
Temperature	20.1°C
System	2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (mg/L): 1.53E-3; 1.84E-4
pH	Not reported
Results Details Method	RP HPLC/RAM; LSC
Standard Deviation Results	± 0.10
Results Details	equilibrium reached at 20 hours; cryogenic cold trap, dry ice acetone bath

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.
OECD Harmonized Template:	logKow
HERO ID:	2188633

EXTRACTION	
Parameter	Data
log k_{ow}	6.98
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; double-syringe apparatus
Solvent, Reactivity, Storage, and Stability	NR; 393 mCi/g; NR; NR
Radiolabel, Source, State, and Purity	C14; Dow Corning; NR; 98.1% Notes: value is radiochemical purity
Temperature	21.6
System	2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (mg/L): 1.53E-3; 1.84E-4
pH	Not reported
Results Details Method	RP HPLC/RAM; LSC
Standard Deviation Results	0.15
Results Details	equilibrium reached at 20 hours; cryogenic cold trap, dry ice acetone bath

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.
OECD Harmonized Template:	logKow
HERO ID:	2188633

EXTRACTION	
Parameter	Data
log k_{ow}	6.98
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; double-syringe apparatus
Solvent, Reactivity, Storage, and Stability	NR; 393 mCi/g; NR; NR
Radiolabel, Source, State, and Purity	C14; Dow Corning; NR; 98.1% Notes: value is radiochemical purity
Temperature	21.7
System	2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (mg/L): 1.53E-3; 1.84E-4
pH	Not reported
Results Details Method	RP HPLC/RAM; LSC
Standard Deviation Results	0.11
Results Details	equilibrium reached at 20 hours; cryogenic cold trap, dry ice acetone bath

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

Study Citation:	Xu, S., Kropscott, B. (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12):2702-2710.
OECD Harmonized Template:	logKow
HERO ID:	2535012

EXTRACTION	
Parameter	Data
log k_{ow}	6.59 - 7.13
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; double-syringe method
Solvent, Reactivity, Storage, and Stability	NR; 393 mCi/g; NR; NR
Radiolabel, Source, State, and Purity	C14; Dow Corning; NR; >98%
Temperature	5.7; 12.2; 21.7; 34.8°C
System	2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (ug/L): 1.4-2.0; 0.9-1.3; 0.8-1.5; 1.9-4.0
pH	Not reported
Results Details Method	RP HPLC/RAM; LSC
Standard Deviation Results	0.07; 0.07; 0.13; 0.10
Results Details	Temperature has substantial effects on measured partition coefficients; equilibrium at 6 hours

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	AG,, Bayer (1990). Contributions on assessment of the aquatic toxicity of OMCTS with cover letter.
OECD Harmonized Template:	Water Solubility
HERO ID:	5899898

EXTRACTION	
Parameter	Data
Water Solubility	39 - 47 µg/L
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	No; NR; Liquid; NR
Temperature	Not reported
System	Ion-exchange test water (0-36 ug/L D4) and D4 charged to a Teflon cup are sealed in vessel; gas phase becomes saturated followed by solution saturation; test time varied (24-168 hours)
pH	Not reported
Results Details Method	extracted in n-hexane and analyzed by GC-FID; n-undecane internal standard
Standard Deviation Results	Not reported
Results Details	mean value 42±0.9 µg/L

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	AG., Bayer (1990). Contributions on assessment of the aquatic toxicity of OMCTS with cover letter.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	5899898			
EXTRACTION				
Parameter	Data			
Water Solubility	27 - 33 µg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	No; NR; Liquid; NR			
Temperature	25°C			
System	"ISO" test water and D4 charged to a Teflon cup are sealed in vessel; gas phase becomes saturated followed by solution saturation; test time varied (48-92 hours)			
pH	Not reported			
Results Details Method	extracted in n-hexane and analyzed by GC-FID; n-undecane internal standard			
Standard Deviation Results	Not reported			
Results Details	mean value 29.5 µg/L (n=6)no standard deviation reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Corning,, Dow (1993). Aqueous solubility of the oligometric permethylsiloxanes with cover letter dated 090893.
OECD Harmonized Template:	Water Solubility
HERO ID:	5895933

EXTRACTION	
Parameter	Data
Water Solubility	0.0562 - ppm
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	no; experimental; Purge and trap technique
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported
Radiolabel, Source, State, and Purity	Not reported; DOW CORNING 200(R) Fluid; Not reported; >99% Notes: Purified using spinning band distillation of commercial Dow Corning fluids
Temperature	25 degrees C
System	Not reported
pH	Not reported
Results Details Method	Analyzed by direct GC/MS analysis using the SIM mode
Standard Deviation Results	+/- 2.5 ppb
Results Details	Converted from 56.20 +/- 2.5 ppb. Also reported as 189.86 nmol/L.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The measured data is consistent with the chemicals other physical and chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.

Overall Quality Determination

High

Study Citation:	Corning,, Dow (1987). The n-octanol/water partition coefficient of octamethylcyclotetrasiloxane with attachment and cover letter dated 092987.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	5905948			
EXTRACTION				
Parameter	Data			
Water Solubility	ca. 50 ppb			
CASRN and Test Material	556-67-2; D4			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; >99.5%			
Temperature	Not reported			
System	100 uL (0.0956 g) D4 in 25 g (30.23 mL) octanol placed in a 250 mL wheatman bottle with 150 mL distilled water; bottle capped and agitated for an hour, and allowed to settle overnight. Process repeated with 1 g D4 in 25 g octanol.			
pH	Not reported			
Results Details Method	Aqueous samples extracted with hexane prior to analysis by GC with FID detector and Carbowax 20M capillary column; LOD = 10 ppb			
Standard Deviation Results	Not reported			
Results Details	Water solubility determined as a result of log Kow measurement.First determination: 25 ppb in water; second determination: 53 ppb in water			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups).
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	Methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	Medium	Analytic method is non-standard but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Corning,, Dow (1987). The water solubility of octamethylcyclotetrasiloxane with attachments and cover letter dated 092987.
OECD Harmonized Template:	Water Solubility
HERO ID:	5905954

EXTRACTION

Parameter	Data
Water Solubility	40 - 80 ppb
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Water ran (7.7 L/hr) through a closed recirculating system through a column with sand coated with D4 for 4 or 7 days. An open recirculating system was also maintained. A third experiment was conducted by shaking a separatory funnel for 30 min.
pH	Not reported
Results Details Method	Effluent filtered through 0.2 micron or 0.45 micron filter. Hexane extraction prior to analysis by GC-FID with spitless injection; LOD = 10 ppb; 89-95% recovery
Standard Deviation Results	Not reported
Results Details	Closed recirculating system: 76 ppb (unfiltered); 40 ppb (0.45 micron filter)Open recirculating system: 27±3 ppb (possible evaporative loss)Separatory funnel: 8.1-2.9 ppm (unfiltered); 28-16 ppb (0.20 micron filter)D4 is not truly dispersed in water, may be present in various particle sizes.

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups).
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	High	Methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4: Reliability/Analytical Method	High	Data are obtained by accepted standard analytic methods.
Domain 3: Other	Metric 5: Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

Study Citation:	Corning,, Dow (1991). Aqueous solubility studies of octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Water Solubility
HERO ID:	7310465

EXTRACTION	
Parameter	Data
Water Solubility	56 ppb
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Non-Turbulent Partitioning of D4
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	No; Dow Chemical; Liquid; >99% pure
Temperature	23°C
System	Distilled water placed in a 3-necked flask fitted with a stopcock drain was covered with a 1. 5 cm layer of pure Liquid D4 and stirred very gently and sampled periodically over 87 days.
pH	Not reported
Results Details Method	Purge and Trap with GC/MS
Standard Deviation Results	±3.5 ppb
Results Details	WS ranged from 50-60 ppb

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..			
OECD Harmonized Template:	Water Solubility			
HERO ID:	6984075			
EXTRACTION				
Parameter	Data			
Water Solubility	5.6E10 mg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	23°C			
System	Not reported			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	Not reported			
Results Details	reported as 189.86E6 mmol/Lreaxys incorrectly extracted the data from the original source; should be 189.86E-6 mmol/L			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	Uninformative	Data measured for the subject chemical substance are not consistent with the subject chemical substance structural properties, features or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a recognized, peer- reviewed data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Uninformative		

* Related References: Varapath, Sudarsanan; Frye, Cecil L.; Hamelink, Jerry; Environmental Toxicology and Chemistry; vol. 15; nb. 8;(1996); p. 1263 - 1265

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.
OECD Harmonized Template:	Water Solubility
HERO ID:	7994661

EXTRACTION	
Parameter	Data
Water Solubility	110 - 115 g/L
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20 - 25deg C
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	3 values reported in Reaxys, reported as 100 g solvent (water) dissolves 11 - 11.5 g substance

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Sokolow 1959; Hyde 1953; Hyde 1953

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.
OECD Harmonized Template:	Water Solubility
HERO ID:	7995011

EXTRACTION	
Parameter	Data
Water Solubility	2450 g/L
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	25°C
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	2 values reported in Reaxys; temperature reported for one value only.

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Hyde; Journal of the American Chemical Society; vol. 75; (1953); p. 2166

Study Citation:	Gee, R. P. (2015). Emulsion polymerization of dimethylcyclsiloxane in cationic emulsion: Mechanism study utilizing two phase liquid-liquid reaction kinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects 481:297-306.
OECD Harmonized Template:	Water Solubility
HERO ID:	6833841

EXTRACTION	
Parameter	Data
Water Solubility	0.161 mg/L
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	no; Dow Corning Corp; Liquid; 99.3%
Temperature	40°C
System	Varprath
pH	Not reported
Results Details Method	GC-MS
Standard Deviation Results	Not reported
Results Details	reported as 544 nmol/L at 40 C

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Gee, R. P. (2015). Emulsion polymerization of dimethylcyclsiloxane in cationic emulsion: Mechanism study utilizing two phase liquid-liquid reaction kinetics. Colloids and Surfaces A: Physicochemical and Engineering Aspects 481:297-306.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	6833841			
EXTRACTION				
Parameter	Data			
Water Solubility	0.40 mg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	no; Dow Corning Corp; Liquid; 99.3%			
Temperature	60°C			
System	Varprath			
pH	Not reported			
Results Details Method	GC-MS			
Standard Deviation Results	Not reported			
Results Details	reported as 1348 nmol/L at 60 C			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.	
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.	
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.	
	Metric 4: Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.	
Domain 3: Other	Metric 5: Databases	N/A	Rating of this factor is not applicable to this kind of information.	
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.	
Overall Quality Determination		High		

Study Citation:	Kochetkov, A., Smith, J. S., Ravikrishna, R., Valsaraj, K. T., Thibodeaux, L. J. (2001). Air-water partition constants for volatile methyl siloxanes. Environmental Toxicology and Chemistry 20(10):2184-2188.
OECD Harmonized Template:	Water Solubility
HERO ID:	7303416

EXTRACTION	
Parameter	Data
Water Solubility	56.2 - ug/L
CASRN and Test Material	Not Reported; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; experimental; NR
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; Liquid; NR Notes: NR
Temperature	298K
System	NR
pH	NR
Results Details Method	NR
Standard Deviation Results	+/-2.5 ug/L
Results Details	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	N/A	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Citing HERO ID 6990705 and 6984031; entered into Distiller under HERO ID 6984031.

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Water Solubility
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Water Solubility	0.056 mg/L
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	23°C
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use or includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Varaprath S et al; Environ Toxicol Chem 15(8): 1263-1265 (1996)

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.		
OECD Harmonized Template:	Water Solubility		
HERO ID:	6982832		
EXTRACTION			
Parameter	Data		
Water Solubility	0.033 mg/L		
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane		
Confidentiality, Type, and Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, and Purity	NR; NR; NR; NR		
Temperature	25°C		
System	Not reported		
pH	Not reported		
Results Details Method	Not reported		
Standard Deviation Results	Not reported		
Results Details	measured in synthetic seawater		
EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High	

* Related References: ECHA; Search for Chemicals. Octamethylcyclotetrasiloxane (CAS 556-67-2) Registered Substances Dossier. European Chemical Agency. Available from, as of Aug 17, 2015: <http://echa.europa.eu/>

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	6982832			
EXTRACTION				
Parameter	Data			
Water Solubility	Not Reported			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not reported			
System	Not reported			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	Not reported			
Results Details	reported as "none"			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	Uninformative	Source reports as "none" which may indicate the compound was not tested.
	Metric 2:	Appropriateness	Low	Data measured for the subject chemical substance are not consistent with the subject chemical substance structural properties, features or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer- reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a recognized, peer- reviewed data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Uninformative		

* Related References: ILO International Chemical Safety Cards (ICSC)

Study Citation:	NLM, (2021). Pubchem: 1,3-Disiloxanediol, 1,1,3,3-tetramethyl-. CAS registry number: 1118-15-6.
OECD Harmonized Template:	Water Solubility
HERO ID:	7997877

EXTRACTION	
Parameter	Data
Water Solubility	0.66 M
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	Equivalent to 100,000 mg/L based on MW 166.32 g/mol

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance. Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
	Metric 2: Appropriateness	High	
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome. The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
	Metric 4: Reliability/Analytical Method	Medium	
Domain 3: Other	Metric 5: Databases	Medium	Data is from a publicly available secondary source with references to non-peer reviewed original sources. Rating of this factor is not applicable to this kind of information.
	Metric 6: Models	N/A	

Overall Quality Determination

High

* Related References: EPA DSSTox

Study Citation:	NLM, (2021). Pubchem: Dimethylsilanediol. CAS registry number: 1066-42-8.
OECD Harmonized Template:	Water Solubility
HERO ID:	7998093

EXTRACTION	
Parameter	Data
Water Solubility	10.85 M
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	Equivalent to 1,000,000 mg/L based on MW 92.17 g/mol

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance. Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
	Metric 2: Appropriateness	High	
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome. The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
	Metric 4: Reliability/Analytical Method	Medium	
Domain 3: Other	Metric 5: Databases	Medium	Data is from a publicly available secondary source with references to non-peer reviewed original sources. Rating of this factor is not applicable to this kind of information.
	Metric 6: Models	N/A	

Overall Quality Determination

High

* Related References: EPA DSSTox

Study Citation:	Rhone-Poulenc, (1990). Environmental fate of D4 with cover letter.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	5899916			
EXTRACTION				
Parameter	Data			
Water Solubility	20 - 750 ppb			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	No; NR; Liquid; NR			
Temperature	15-40°C			
System	OECD like shake flask method. 1-2 day stir time; 2-3 day settling time; variable stirring temperature; 15 deg C settling temperature			
pH	Not reported			
Results Details Method	extracted in toluene; analyzed by GC/MS			
Standard Deviation Results	270 ppb			
Results Details	Mean value of 330 ppb (n=7). The large discrepancy between the results cannot be explained by either the duration of the 2 steps or the stirring temperature. Detection of microbubbles of D4 cannot be checked.			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Low	The methodology indicates that method bias is likely.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method described is not appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Medium		

Study Citation:	Rhone-Poulenc, (1990). Environmental fate of D4 with cover letter.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	5899916			
EXTRACTION				
Parameter	Data			
Water Solubility	15 - 240			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	No; NR; Liquid; NR			
Temperature	20°C			
System	generator column (EPA like); Chromosorb W 80-100 mesh; glass beads @ 1 mm; glass beads @ 40-70 um			
pH	Not reported			
Results Details Method	extracted in toluene; analyzed by GC/MS			
Standard Deviation Results	Not reported			
Results Details	It is impossible to deduce a precise value from the present results.			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Low	The methodology indicates that method bias is likely.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method described is not appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		Medium		

Study Citation:	Sousa, J. V., Mcnamara, P. C., Putt, A. E., Machado, M. W., Surprenant, D. C., Hamelink, J. L., Kent, D. J., Silberhorn, E. M., Hobson, J. F. (1995). Effects of octamethylcyclotetrasiloxane (OMCTS) on freshwater and marine organisms. Environmental Toxicology and Chemistry 14(10):1639-1647.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	6834101			
EXTRACTION				
Parameter	Data			
Water Solubility	0.074 mg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; The material was stored in the dark at room temperature (approximately 20°C).; NR			
Radiolabel, Source, State, and Purity	no; Dow Corning Corp; Liquid; >99%			
Temperature	Not reported			
System	Column generator			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	±9.4			
Results Details	reported as 74 µg/L in freshwater			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is described in limited detail but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Sousa, J. V., Mcnamara, P. C., Putt, A. E., Machado, M. W., Surprenant, D. C., Hamelink, J. L., Kent, D. J., Silberhorn, E. M., Hobson, J. F. (1995). Effects of octamethylcyclotetrasiloxane (OMCTS) on freshwater and marine organisms. Environmental Toxicology and Chemistry 14(10):1639-1647.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	6834101			
EXTRACTION				
Parameter	Data			
Water Solubility	0.033 mg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; The material was stored in the dark at room temperature (approximately 20°C).; NR			
Radiolabel, Source, State, and Purity	no; Dow Corning Corp; Liquid; >99%			
Temperature	Not reported			
System	Column generator			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	±3.6			
Results Details	Reported as 33 µg/L in saltwater			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is described in limited detail but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Springborn Laboratories, (1989). Octamethylcyclotetrasiloxane - determination of the water solubility in synthetic seawater.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	5889412			
EXTRACTION				
Parameter	Data			
Water Solubility	29 - > 50 µg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Generator Column Method Following TSCA Test Standard 796.1860 and amendment #1			
Solvent, Reactivity, Storage, and Stability	NR; NR; 20°C in the dark; NR			
Radiolabel, Source, State, and Purity	No; Dow Corning Corp, MI; Liquid; 99%			
Temperature	25°C			
System	simulated seawater; generator column directly coupled to a purge and trap liquid sample concentrator for GC/MS analysis. Equilibrated for 25 hours.			
pH	Not reported			
Results Details Method	GC/MS calibrated with quantification on the 281 atomic mass unit ion.			
Standard Deviation Results	±3.6 ug/L			
Results Details	mean is 33 µg/L for 7 measurements; Mean recovery from fresh and filtered seawater was 96.5±3.99% and 97.3±12.2%; RSD was 8.8 and 1.1% at 5.00 and 20.0 µg/L, respectively. 3 measurements above the limit of detection (50 ug/L) were not included in statistical treatment.			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Springborn Laboratories, (1989). Octamethylcyclotetrasiloxane - determination of the water solubility in freshwater.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	5889414			
EXTRACTION				
Parameter	Data			
Water Solubility	60 - > 250 µg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Generator Column Method Following TSCA Test Standard 796.1860 and amendment #1			
Solvent, Reactivity, Storage, and Stability	NR; NR; 20°C in the dark; NR			
Radiolabel, Source, State, and Purity	No; Dow Corning Corp, MI; Liquid; 99%			
Temperature	25°C			
System	generator column directly coupled to a purge and trap liquid sample concentrator for GC/MS analysis. Equilibrated for 32.5 hours.			
pH	Not reported			
Results Details Method	GC/MS calibrated with quantification on the 281 atomic mass unit ion.			
Standard Deviation Results	±9.4 ug/L			
Results Details	Mean 74 ug/L for 12 measurements; Mean recovery 103±12.6%. One measurement was above the limit of detection (250 ug/L) and was not included in the statistical treatment.			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Springborn Laboratories, (1989). Octamethylcyclotetrasiloxane – Determination of the water solubility in freshwater.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	7006395			
EXTRACTION				
Parameter	Data			
Water Solubility	74 µg/L			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Generator Column Method Following TSCA Test Standard 796.1860 and amendment #1			
Solvent, Reactivity, Storage, and Stability	NR; NR; 20°C in the dark; NR			
Radiolabel, Source, State, and Purity	No; Dow Corning Corp, MI; Liquid; 99%			
Temperature	25°C			
System	Generator column directly coupled to a purge and trap liquid sample concentrator for GC/MS analysis. Equilibrated for 32.5 hours.			
pH	Not reported			
Results Details Method	GC/MS calibrated with quantification on the 281 atomic mass unit ion.			
Standard Deviation Results	±9.4 µg/L			
Results Details	Mean 74 µg/L for 12 measurements; Mean recovery 103±12.6%			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Water Solubility
HERO ID:	6982826

EXTRACTION	
Parameter	Data
Water Solubility	0.005 mg/L
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	average of 2 values; 1.69E-8 to 1.70E-8 mol/L

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate The analytical method is non-standard but is expected to be appropriate OR the analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: PhysProp; Kovdienko, et. al. Molecular informatics 29.5 (2010): 394-406.

Study Citation:	U.S. EPA, (2021). Chemistry dashboard information for 1,3-Disiloxanediol, 1,1,3,3-tetramethyl-. CAS registry number: 1118-15-6.
OECD Harmonized Template:	Water Solubility
HERO ID:	7995923

EXTRACTION	
Parameter	Data
Water Solubility	0.662 M
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	Equivalent to 110,000 mg/L based on MW 166.32 g/mol

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance. Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
	Metric 2: Appropriateness	High	
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome. The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
	Metric 4: Reliability/Analytical Method	Medium	
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources. Rating of this factor is not applicable to this kind of information.
	Metric 6: Models	N/A	

Overall Quality Determination

High

* Related References: Kovdienko, et. al. Molecular informatics 29.5 (2010): 394-406.

Study Citation:	U.S. EPA, (2021). Chemistry dashboard information for 1,3-Disiloxanediol, 1,1,3,3-tetramethyl-. CAS registry number: 1118-15-6.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	7995923			
EXTRACTION				
Parameter	Data			
Water Solubility	0.661 M			
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not reported			
System	Not reported			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	Not reported			
Results Details	Equivalent to 110,000 mg/L based on MW 166.32 g/mol			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: PhysProp

Study Citation:	U.S. EPA, (2021). Chemistry dashboard information for Dimethylsilanediol. CAS registry number: 1066-42-8.
OECD Harmonized Template:	Water Solubility
HERO ID:	7996867

EXTRACTION	
Parameter	Data
Water Solubility	11.0 M
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
pH	Not reported
Results Details Method	Not reported
Standard Deviation Results	Not reported
Results Details	Equivalent to 1,010,000 mg/L based on MW 92.17 g/mol

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Kovdienko, et. al. Molecular informatics 29.5 (2010): 394-406.

Study Citation:	U.S. EPA, (2021). Chemistry dashboard information for Dimethylsilanediol. CAS registry number: 1066-42-8.			
OECD Harmonized Template:	Water Solubility			
HERO ID:	7996867			
EXTRACTION				
Parameter	Data			
Water Solubility	10.8 M			
CASRN and Test Material	1066-42-8; Dimethylsilanediol			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not reported			
System	Not reported			
pH	Not reported			
Results Details Method	Not reported			
Standard Deviation Results	Not reported			
Results Details	Equivalent to 995,000 mg/L based on MW 92.17 g/mol			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: PhysProp

Study Citation:	Varapath, S., Frye, C. L., Hamelink, J. (1996). Aqueous solubility of permethylsiloxanes (silicones). Environmental Toxicology and Chemistry 15(8):1263-1265.
OECD Harmonized Template:	Water Solubility
HERO ID:	6984031

EXTRACTION	
Parameter	Data
Water Solubility	0.0562 ppm
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; non-turbulent method
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; Dow Corning Corp; Aldrich Chemical Co; Hulas America, etc.; NR; NR Notes: distilled only if purity was <99%
Temperature	23 C
System	distilled water; very gentle stirring with magnetic bar to avoid turbulence and cavitation; methanol solutions of pure cmpds by serial dilution
pH	Not reported
Results Details Method	methanol solutions used for calibration; GC-MS purge and trap
Standard Deviation Results	2.50 ppb
Results Details	reported as 56.20 ppb; also aqueous solubility = 189.86 nmol/L

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Flash Point
HERO ID:	6982832

EXTRACTION

Parameter	Data
Flash Point	55 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
System	closed cup
Standard Deviation Results	Not reported
Results Details	131°F

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Sigma-Aldrich; Safety Data Sheet for Octamethylcyclotetrasiloxane. Product Number: 235695, Version 3.14 (Revision Date 02/28/2015). Available from, as of September 30, 2015: <http://www.sigmaaldrich.com/safety-center.html>

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Flash Point			
HERO ID:	6982832			
EXTRACTION				
Parameter	Data			
Flash Point	56 C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
System	Not reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: ILO International Chemical Safety Cards (ICSC)

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Flash Point
HERO ID:	6982833

EXTRACTION

Parameter	Data
Flash Point	57 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: OU Chemical Safety Data (No longer updated)

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Flash Point
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Flash Point	56 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Alfa Aesar

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Flash Point			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Flash Point	56 C			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	none; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
System	Not reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Oakwood

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Flash Point
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Flash Point	54 C
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: LabNetwork

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..
OECD Harmonized Template:	Viscosity
HERO ID:	6984075

EXTRACTION

Parameter	Data
Viscosity	2.187 - 2.239
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	25-25.1
Test Conditions	Not reported
Standard Deviation Results	Not reported
Results Details	13 values were reported in Reaxys; 4 values were reported in the range of 2.187-2.239 cP at 25-25.1°C; 9 values were outside this range or measured at unreported or non-standard temperatures.

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

Study Citation:	Liu, F., Beer, de, S., Ende, v.d., D., Mugele, F. (2013). Atomic force microscopy of confined liquids using the thermal bending fluctuations of the cantilever. Physical Review E (Statistical, Nonlinear, and Soft Matter Physics) 87(6):062406.
OECD Harmonized Template:	Viscosity
HERO ID:	6835221

EXTRACTION	
Parameter	Data
Viscosity	2.7
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	no; Fluka; Liquid; $\geq 99.0\%$
Temperature	300 K
Test Conditions	Atomic force microscopy
Standard Deviation Results	± 0.2 mPa.s
Results Details	2.7 mPa.s

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Viscosity
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Viscosity	2.21
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	25°C
Test Conditions	Not reported
Standard Deviation Results	Not reported
Results Details	reported as 2.30 cSt, assumed density 0.96 g/cm3

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination **High**

* Related References: Butts M et al; Silicones. Kirk-Othmer Encyclopedia of Chemical Technology. (1999-2015). New York, NY: John Wiley & Sons. Online Posting Date: Dec 20, 2002.

Study Citation:	Palczewska-Tulinska, M., Oracz, P. (2005). Selected physicochemical properties of hexamethylcyclotrisiloxane, octamethylcyclotetrasiloxane, and decamethylcyclopentasiloxane. Journal of Chemical and Engineering Data 50(5):1711-1719.
OECD Harmonized Template:	Viscosity
HERO ID:	3569075

EXTRACTION	
Parameter	Data
Viscosity	2.45
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	no; 99% dried, sieved, rectified, boiled refluxed.; Liquid; 99.98%
Temperature	293.15 K
Test Conditions	Hoeppler viscosimeter
Standard Deviation Results	$\pm 0.009 \sigma$ (n/mPa-s)
Results Details	reported as 2.45 mPa-s at 293.15 K; Ranged from 2.45-0.41 mPa-s at 293.15-423.15 K.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..
OECD Harmonized Template:	Refractive Index
HERO ID:	6984075

EXTRACTION	
Parameter	Data
Refractive Index	1.3935 - 1.4013
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	19.99-25°C
System	Not reported
Standard Deviation Results	Not reported
Results Details	22 values were reported in Reaxys; 15 values were reported in the range of 1.3935 to 1.4013 at 19.99-25°C; 7 values were outside this range or measured at unreported or non-standard temperatures.
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Data range determined from multiple primary sources in REAXYS.

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5,7,7-octamethyltetrasiloxane-1,7-diol. CAS Registry Number: 3081-07-0.
OECD Harmonized Template:	Refractive Index
HERO ID:	7991715

EXTRACTION	
Parameter	Data
Refractive Index	1.4054 - 1.4088
CASRN and Test Material	3081-07-0; Octamethyltetrasiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20-25°C
System	Not reported
Standard Deviation Results	Not reported
Results Details	3 values were reported in Reaxys, 589 nm
Results Details Methods	Not Reported
Parameter	Not Reported

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.	
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.	
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.	
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.	
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.	

Overall Quality Determination

High

* Related References: Harris 1963; Andrianov, K.A. et al.; Bulletin of the Academy of Sciences of the USSR Division of Chemical Science; (1962); p. 2144 - 2146; Sokolow; Zhurnal Obshchei Khimii; vol. 29; (1959); p. 258,261, 263; engl. Ausg. S. 262, 265, 266

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for 1,1,3,3,5,5-hexamethyltrisiloxane-1,5-diol. CAS Registry Number: 3663-50-1.
OECD Harmonized Template:	Refractive Index
HERO ID:	7992314

EXTRACTION	
Parameter	Data
Refractive Index	1.405 - 1.409
CASRN and Test Material	3663-50-1; Hexamethyltrisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20-25°C
System	Not reported
Standard Deviation Results	Not reported
Results Details	6 values were reported in Reaxys in the range of 1.405 - 1.409, 589 nm
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Voronokov et al. 1971; Kaufman and Karlin 1970; Union Carbide Patent 1965; Harris 1963; Andrianov 1962; Sokolow 1959

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for tetramethyl-1,3-disiloxanediol. CAS Registry Number: 1118-15-6.
OECD Harmonized Template:	Refractive Index
HERO ID:	7994661

EXTRACTION	
Parameter	Data
Refractive Index	1.457 - 1.466
CASRN and Test Material	1118-15-6; Tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	25°C
System	Not reported
Standard Deviation Results	Not reported
Results Details	2 values reported in Reaxys: 1.457 - 1.461 (n1) and 1.462 - 1.466 (n2), 589.3 nm
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Hyde; Journal of the American Chemical Society;vol. 75; (1953); p. 2166, View in Reaxys; GmelinHandbuch der Anorganischen Chemie; vol. Si:MVOL.C; 91, page 248 - 251

Study Citation:	Elsevier, (2021). Reaxys: physical-chemical property data for dimethylsilanediol. CAS Registry Number: 1066-42-8.
OECD Harmonized Template:	Refractive Index
HERO ID:	7995011

EXTRACTION	
Parameter	Data
Refractive Index	1.444 - 1.456
CASRN and Test Material	1066-42-8; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	25°C
System	Not reported
Standard Deviation Results	Not reported
Results Details	2 values were reported in Reaxys; 1.444 - 1.448 (n2) and 1.452 - 1.456 (n1), 589.3 nm
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Hyde; Journal of the American Chemical Society;vol. 75; (1953); p. 2166

Study Citation:	Haynes, W.,M. (2014). Octamethylcyclotetrasiloxane. :3-424.
OECD Harmonized Template:	Refractive Index
HERO ID:	6982969

EXTRACTION	
Parameter	Data
Refractive Index	1.3968
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20°C/D
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Refractive Index
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Refractive Index	1.3968
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20 C/D
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION			
Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Haynes, W.M. (ed.). CRC Handbook of Chemistry and Physics. 95th Edition. CRC Press LLC, Boca Raton: FL 2014-2015, p. 3-424

Study Citation:	O'Neil, M. J. (2013). Octamethylcyclotetrasiloxane. :1255.
OECD Harmonized Template:	Refractive Index
HERO ID:	6982970

EXTRACTION	
Parameter	Data
Refractive Index	1.3968
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20°C/D
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Refractive Index
HERO ID:	6982833

EXTRACTION	
Parameter	Data
Refractive Index	1.396
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Alfa Aesar

Study Citation:	RSC, (2020). ChemSpider: Octamethylcyclotetrasiloxane.			
OECD Harmonized Template:	Refractive Index			
HERO ID:	6982833			
EXTRACTION				
Parameter	Data			
Refractive Index	1.396			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; NR; NR; NR			
Temperature	Not reported			
System	Not reported			
Standard Deviation Results	Not reported			
Results Details	Not reported			
Results Details Methods	Not Reported			
Parameter	Not Reported			
EVALUATION				
Domain	Metric	Rating		Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data’s inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

* Related References: Sigma-Aldrich

Study Citation:	Zhang, Y., Dong, H., Wu, C., Yu, L., Xu, J. (2015). The mixing properties of 1,3,5-trimethyl-1,3,5-tris(3,3,3-trifluoropropyl) cyclotrisiloxane with various organosilicon compounds at different temperatures. Journal of Chemical Thermodynamics 81:16-25.
OECD Harmonized Template:	Refractive Index
HERO ID:	4279677

EXTRACTION	
Parameter	Data
Refractive Index	1.39674
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	no; Dow Corning; Liquid; 0.995 mass fraction Notes: measured by Gas and Liquid Chromatography.
Temperature	293.15 K
System	Automatically analyzed using a DMA4500/RXA170 combined system(Anton Paar) with a refractive index uncertainty of ± 0.00004 nD.
Standard Deviation Results	Not reported
Results Details	Reported as 1.39674 at 293.15 K; also measured at 1.38925-1.37917 over 308.15-328.15 K, respectively.
Results Details Methods	Not Reported
Parameter	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Corning,, Dow (2014). Non-regulated study: DMSD environmental modeling using SIMPLETREAT and QWASI.			
OECD Harmonized Template:	Henry’s Law			
HERO ID:	9644522			
EXTRACTION				
Parameter	Data			
Henry’s Law	Not Reported			
CASRN and Test Material	1066-42-8; D4			
Confidentiality, Type, and Guideline	no; Not specified; Not reported			
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported			
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Not reported			
Temperature	20 degrees C			
pH	Not reported			
System	Not reported			
Standard Deviation Results	Not reported			
Results Details	Log Kaw = –6.94			
Results Details Methods	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The data is consistent with the chemicals other physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.
Overall Quality Determination		Medium		

* Related References: Citing Xu, S. & Kropscott, B., 2012. Method for Simultaneous Determination of Partition Coefficients for Cyclic Volatile Methylsiloxanes and Dimethylsilanediol. Anal. Chem., 84(4), pp. 1948-1955. (HERO ID 2188633)

Study Citation:	Corning,, Dow (2014). Non-regulated study: DMSD environmental modeling using SIMPLETREAT and QWASI.			
OECD Harmonized Template:	Henry’s Law			
HERO ID:	9644522			
EXTRACTION				
Parameter	Data			
Henry’s Law	1.74E-4 - Pa-m3/mol			
CASRN and Test Material	1066-42-8; D4			
Confidentiality, Type, and Guideline	no; Not specified; Not reported			
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported			
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Not reported			
Temperature	25 degrees C			
pH	Not reported			
System	Not reported			
Standard Deviation Results	Not reported			
Results Details	Not Reported			
Results Details Methods	Not reported			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The data is consistent with the chemicals other physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.
Overall Quality Determination		Medium		

* Related References: Citing Xu, S., 2011. Temperature Dependence of Air/Water, 1-Octanol/Air, 1-Octanol/Water Partitioning Coefficients of Dimethylsilanediol (DMSD) (CAS No: 1066-42-8), s.l.: s.n. (No HERO ID)

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).
OECD Harmonized Template:	Henry's Law
HERO ID:	10709359

EXTRACTION	
Parameter	Data
Henry's Law	4.16E-07 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	No; calculated; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	25°C
pH	Not Reported
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace
Standard Deviation Results	0.324
Results Details	Reported as log KAW = -4.769; were calculated using temperature dependence parameters from linear regressions of log K on 1/T (K^-1)
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).
OECD Harmonized Template:	Henry's Law
HERO ID:	10709359

EXTRACTION	
Parameter	Data
Henry's Law	1.73E-07 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	27°C
pH	Not Reported
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace
Standard Deviation Results	0.038
Results Details	Reported as log KAW = -5.153
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	Henry's Law			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
Henry's Law	1.91E-06 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; calculated; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	25°C			
pH	Not Reported			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
Standard Deviation Results	0.270			
Results Details	Reported as log KAW = -4.107; Weighted mean and pooled standard error for all experimental observations of log KAW; no significant temperature dependence was detected.			
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).
OECD Harmonized Template:	Henry's Law
HERO ID:	10709359

EXTRACTION	
Parameter	Data
Henry's Law	2.58E-07 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	12°C
pH	Not Reported
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace
Standard Deviation Results	0.037
Results Details	Reported as log KAW = -4.957
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).
OECD Harmonized Template:	Henry's Law
HERO ID:	10709359

EXTRACTION	
Parameter	Data
Henry's Law	5.25E-07 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Temperature	20°C
pH	Not Reported
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace
Standard Deviation Results	0.064
Results Details	Reported as log KAW = -4.661
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	Henry's Law			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
Henry's Law	1.37E-06 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	35°C			
pH	Not Reported			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
Standard Deviation Results	0.174			
Results Details	Reported as log KAW = -4.266			
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	Henry's Law			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
Henry's Law	1.13E-06 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	27°C			
pH	Not Reported			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
Standard Deviation Results	0.127			
Results Details	Reported as log KAW = -4.340			
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	Henry’s Law			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
Henry’s Law	1.23E-06 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	20°C			
pH	Not Reported			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
Standard Deviation Results	0.090			
Results Details	Reported as log KAW = -4.291			
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	Henry’s Law			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
Henry’s Law	1.12E-06 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol			
CASRN and Test Material	Not Reported; hexamethyltrisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	12°C			
pH	Not Reported			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
Standard Deviation Results	0.136			
Results Details	Reported as log KAW = -4.320			
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Dow Chemical, (2022). Partition coefficients for tetramethyldisiloxane-alpha,omega-diol (dimer diol) and hexamethyltrisiloxane-alpha,omega-diol (trimer diol).			
OECD Harmonized Template:	Henry’s Law			
HERO ID:	10709359			
EXTRACTION				
Parameter	Data			
Henry’s Law	1.39E-06 (Calculated by reviewer based on reported log Kaw values) - atm-m3/mol			
CASRN and Test Material	Not Reported; tetramethyldisiloxanediol			
Confidentiality, Type, and Guideline	No; experimental; Partition coefficients between n-octanol, water, and air at different temperatures based on experimental measurements			
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported			
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported			
Temperature	35°C			
pH	Not Reported			
System	n-octanol saturated water solution in a custom-made three-phase equilibrium vessel with a separate water-saturated n-octanol phase and a 100 mL headspace			
Standard Deviation Results	0.095			
Results Details	Reported as log KAW = -4.261			
Results Details Methods	High Performance Liquid Chromatograph (HPLC) equipped with an online flow scintillation analyzer			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Hamelink, J. L., Simon, P. B., Silberhorn, E. M. (1996). Henry's law constant, volatilization rate, and aquatic half-life of octamethylcyclotetrasiloxane. Environmental Science & Technology 30(6):1946-1952.
OECD Harmonized Template:	Henry's Law
HERO ID:	2803124

EXTRACTION	
Parameter	Data
Henry's Law	3.4
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20°C
pH	Not reported
System	Dynamic experiments with syringes attached to 60 cm diameter circular rack of variable speed laboratory rotator. Apparatus housed in light-free conditions and continuously rotated.
Standard Deviation Results	± 1.37
Results Details	Undimensional Henry's law constant was 3.4±1.37 (grand mean over 5 experiments)
Results Details Methods	Initial concentrations ranging from 4 to 50 µg/L (20°C; 48 hour equilibration period). Purge and trap apparatus Tekmar LSC 2000 with automated sampler. GC conditions: Varian 3740, FID detector, helium carrier, D4 retention time 11.4 min.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Kochetkov, A., Smith, J. S., Ravikrishna, R., Valsaraj, K. T., Thibodeaux, L. J. (2001). Air-water partition constants for volatile methyl siloxanes. Environmental Toxicology and Chemistry 20(10):2184-2188.
OECD Harmonized Template:	Henry's Law
HERO ID:	7303416

EXTRACTION

Parameter	Data
Henry's Law	ca. 23 - ca. 24
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Non-guideline
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	No; Dow Corning (Midland, MI); NR; 99%
Temperature	28°C (301K)
pH	Not reported
System	Static head space method (HS) and modified batch air stripping method (vapor entry loop method VEL) used for direct measurement of Henrys law constant (dimensionless)
Standard Deviation Results	reported with details on results
Results Details	dimensionless HLC: HS method = 23 ± 7 ; VEL method = 24 ± 3 ; for comparison several literature values were reported = 9.6 ± 2.1 , 5.6 ± 0.9 , >17 , 2.98 ± 1.06 , and 3.4, and a calculated HLC at 296K from VP and WS data = 259; source is internally inconsistent and reports different values for same measurement at different locations in text
Results Details Methods	HPLC with FID; calibrated with pure D4 in methanol

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Uninformative	The results reported are inconsistent and the methodology is not reliable for use.
Domain 3: Other	Metric 5: Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

Uninformative

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Henry's Law
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Henry's Law	12.00 atm-m3/mol
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
pH	Not reported
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported
Results Details Methods	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: EPA DSSTox

Study Citation:	NCBI, (2021). PubChem database: compound summary: Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Henry's Law
HERO ID:	6982832

EXTRACTION	
Parameter	Data
Henry's Law	13.4 atm-m ³ /mol
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	25°C
pH	Not reported
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported
Results Details Methods	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	he analytical method is unknown but is the analytical method is unknown but is likely to be appropriate likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination	High
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* Related References: Xu S, Kropscott B; Environ Toxicol Chem 33(12): 2702-10 (2014)

Study Citation:	Services,, A.A., Inc., (2000). Phase II studies of the Henry's law constant of OMCTS (octamethylcyclotetrasiloxane).
OECD Harmonized Template:	Henry's Law
HERO ID:	5889409

EXTRACTION	
Parameter	Data
Henry's Law	1.23 - 7.66
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	Methanol; NR; Refrigerated; 1 year
Radiolabel, Source, State, and Purity	No; NR; Liquid; >99.9% (w/w) Notes: OMCTS; lot number DC-1088
Temperature	10-25°C
pH	Not reported
System	Initial concentration 40 µg/L; air/water ratio was 20/80; equilibration period 48 hours
Standard Deviation Results	±0.12, ±0.84, ±1.06, ±2.61 at temperatures of 10, 15, 20, 25°C, respectively.
Results Details	Mean Hc (undimensional) at temperatures of 10, 15, 20, 25°C were 1.35, 2.38, 2.98, 4.78, respectively. Mean recoveries were 79.8, 80.9, 79.8, 84.5% for respective temperatures.
Results Details Methods	purge and trap/GC-FID following standard methods 601 and 8010 with modifications for OMCTS

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	High	The analytical method is based EPA guidelines with analytical methods adjusted for the test substance.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Services., A.A., Inc., (2000). Phase II studies of the Henry's law constant of OMCTS (octamethylcyclotetrasiloxane).
OECD Harmonized Template:	Henry's Law
HERO ID:	5889409

EXTRACTION	
Parameter	Data
Henry's Law	0.98 - 4.18
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	Methanol; NR; Refrigerated; 1 year
Radiolabel, Source, State, and Purity	No; NR; Liquid; >99.9% (w/w) Notes: OMCTS; lot number DC-1088
Temperature	20°C
pH	Not reported
System	Initial concentration 4-32 µg/L; air/water ratio was 20/80; equilibration period 48 hours
Standard Deviation Results	±1.38, ±0.73, ±0.91, ±1.06 at starting concentrations of 4.0, 8.0, 16, 32 µg/L, respectively.
Results Details	Mean Hc (undimensional) at 4, 8, 16, 32 µg/L starting concentration were 2.96, 3.53, 1.91, 2.98, respectively. Mean recoveries were 82.0, 80.5, 82.9, 79.8% for respective starting concentrations.
Results Details Methods	purge and trap/GC-FID following standard methods 601 and 8010 with modifications for OMCTS

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	High	The analytical method is based EPA guidelines with analytical methods adjusted for the test substance.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Services., A.A., Inc., (2000). Phase II studies of the Henry's law constant of OMCTS (octamethylcyclotetrasiloxane).
OECD Harmonized Template:	Henry's Law
HERO ID:	5889409

EXTRACTION	
Parameter	Data
Henry's Law	2.21 - 8.88
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	Methanol; NR; Refrigerated; 1 year
Radiolabel, Source, State, and Purity	No; NR; Liquid; >99.9% (w/w) Notes: OMCTS; lot number DC-1088
Temperature	20°C
pH	Not reported
System	Initial concentration 50 µg/L; air/water ratio was 20/80; equilibration period 24-120 hours
Standard Deviation Results	±0.79, ±0.97, ±1.57, ±3.51, ±1.72 at 24, 48, 72, 96, 120 hours, respectively.
Results Details	Mean Hc (undimensional) at 24, 48, 72, 96, 120 hours were 4.60, 5.62, 7.77, 5.04, 3.42, respectively. Mean recoveries were 91.6, 101.9, 88.2, 79.0, 78.6% for respective equilibration time.
Results Details Methods	purge and trap/GC-FID following standard methods 601 and 8010 with modifications for OMCTS

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	High	The analytical method is based EPA guidelines with analytical methods adjusted for the test substance.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Services,, A.A., Inc., (1990). Henry's law constant of OMCTS (octamethylcyclotetrasiloxane) at 20 degrees.
OECD Harmonized Template:	Henry's Law
HERO ID:	5889489

EXTRACTION	
Parameter	Data
Henry's Law	13.83 - 19.41
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	methanol; NR; 20°C in the dark; Stable
Radiolabel, Source, State, and Purity	No; NR; NR; >99.9% (w/w) Notes: Lot Number DC-1088
Temperature	20°C
pH	not reported
System	equal volumes of air/water with OMCTS (40 µg/L) were equilibrated for 96 hours in a circulating water bath.
Standard Deviation Results	±2.87
Results Details	Mean of 3 values 17.0; mean recovery 89.9±3.7%
Results Details Methods	purge and trap/GC-FID following standard methods 601 and 8010 with modifications for OMCTS

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features or other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	U.S. EPA, (2020). Chemistry dashboard information for Octamethylcyclotetrasiloxane.
OECD Harmonized Template:	Henry's Law
HERO ID:	6982826

EXTRACTION	
Parameter	Data
Henry's Law	12.0 atm-m3/mol
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	none; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	Not reported
pH	Not reported
System	Not reported
Standard Deviation Results	Not reported
Results Details	Not reported
Results Details Methods	Not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical's physical/chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5:	Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Physprop

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.
OECD Harmonized Template:	Henry's Law
HERO ID:	2188633

EXTRACTION	
Parameter	Data
Henry's Law	Not Reported
CASRN and Test Material	Not Reported; Dimethylsilanediol
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	14C-dimethylsilanediol (14C-DMSD): specific activity 522.4 mCi/g; Dow Corning Corporation, Midland, MI, USA; NR; 98% radiochemical purity
Temperature	20.1°C
pH	Not reported
System	Two 100 mL airtight syringes, one with air sampling port and one with water sampling port. The right syringe contained test substance in 1-octanol saturated with water and a gas phase, the left syringe contained 1-octanol saturated water and an air phase
Standard Deviation Results	Not Reported
Results Details	log Kaw = -6.84±0.34; Air = 1.0E-5 mg/L, Water = 70 mg/L
Results Details Methods	HPLC/RAM and LCS: Air samples pushed through cryogenic cold trap and injected with methanol/acetone, brought to room temperature before analysis. Aqueous samples extracted by liquid-liquid extraction with 1-heptanol and DCM, concentrated under a stream of air (extraction efficiency 92.7%). Aqueous samples mixed with Ultimate Gold XR for LCS, small portion of gas extract also analyzed by LCS.

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance's other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.
OECD Harmonized Template:	Henry's Law
HERO ID:	2188633

EXTRACTION	
Parameter	Data
Henry's Law	Not Reported
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	14C-D4: specific activity 393 mCi/g; Dow Corning Corporation, Midland, MI, USA; NR; 98.1% radiochemical purity
Temperature	21.7°C
pH	Not reported
System	Two 100 mL airtight syringes, one with air sampling port and one with water sampling port. The right syringe contained test substance in 1-octanol saturated with water and a gas phase, the left syringe contained 1-octanol saturated water and an air phase
Standard Deviation Results	Not Reported
Results Details	log Kaw = 2.70±0.14 Air = 0.417 mg/L Water = 8.34E-4 mg/L
Results Details Methods	HPLC/RAM and LCS: Air samples pushed through cryogenic cold trap and injected with methanol/acetone, brought to room temperature before analysis. Aqueous samples extracted by liquid-liquid extraction with 1-heptanol and DCM, concentrated under a stream of air (extraction efficiency 92.7%). Aqueous samples mixed with Ultimate Gold XR for LCS, small portion of gas extract also analyzed by LCS.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance's other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.			
OECD Harmonized Template:	Henry's Law			
HERO ID:	2188633			
EXTRACTION				
Parameter	Data			
Henry's Law	Not Reported			
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, and Purity	14C-D4: specific activity 393 mCi/g; Dow Corning Corporation, Midland, MI, USA; NR; 98.1% radiochemical purity			
Temperature	21.6°C			
pH	Not reported			
System	Two 100 mL airtight syringes, one with air sampling port and one with water sampling port. The right syringe contained test substance in 1-octanol saturated with water and a gas phase, the left syringe contained 1-octanol saturated water and an air phase			
Standard Deviation Results	Not Reported			
Results Details	log Kaw = 2.68±0.12; Air = 0.741 mg/L, Water = 1.53E-3 mg/L			
Results Details Methods	HPLC/RAM and LCS: Air samples pushed through cryogenic cold trap and injected with methanol/acetone, brought to room temperature before analysis. Aqueous samples extracted by liquid-liquid extraction with 1-heptanol and DCM, concentrated under a stream of air (extraction efficiency 92.7%). Aqueous samples mixed with Ultimate Gold XR for LCS, small portion of gas extract also analyzed by LCS.			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance's other physical/chemical properties or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	Medium	The analytical method is non-standard but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Xu, S., Kropscott, B. (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12):2702-2710.
OECD Harmonized Template:	Henry's Law
HERO ID:	2535012

EXTRACTION	
Parameter	Data
Henry's Law	1.79 - 3.09
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Non-guideline
Solvent, Reactivity, Storage, and Stability	NR; 393 mCi/g; NR; NR
Radiolabel, Source, State, and Purity	C14; Dow Corning; NR; >98%
Temperature	5.7±0.2; 12.2±0.1; 34.8±0.2°C
pH	Not reported
System	2 air-tight syringes with an air sampling port and a water sampling port
Standard Deviation Results	±0.07, 0.08, 0.13 and 0.14
Results Details	log Kaw = 1.79±0.07, 2.17±0.08 and 3.09±0.14 at 5.7, 12.2 and 34.8°C, respectively; log Kaw = 2.74 at 25°C based on linear regression analysis of data.
Results Details Methods	Conc in water: 1.4-2.0, 0.9-1.3, 1.9-4.0 µg/L; test material dissolved in water saturated 1-octanol in one port; 1-octanol saturated water in other port; incubated at various temperatures. Double-syringe apparatus; air-tight syringes with sampling ports. Equilibrium reached after 6 hours. Cryogenic cold trap, dry ice acetone bath. RP HPLC/RAM; LSC. Radioactivity based concentrations measured as disintegrations/min/mL (DPM/mL) when 3 phases, octanol, water and air, were at equilibrium.

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups).
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	Methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	Medium	Analytic method is non-standard but is expected to be appropriate.
Domain 3: Other	Metric 5:	Databases	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Elsevier, (2019). Reaxys: physical-chemical property data for octamethylcyclotetrasiloxane. CAS Registry Number: 556-67-2..
OECD Harmonized Template:	Dielectric Constant
HERO ID:	6984075

EXTRACTION

Parameter	Data
CASRN and Test Material	556-67-2; Octamethylcyclotetrasiloxane
Confidentiality, Type, and Guideline	None; Experimental; Not reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Dielectric Constant	2.4 - 2.405
Temperature	20°C
System	NR
Results Value	Not Reported
Results Details	Static Dielectric Constant

EVALUATION

Domain	Metric	Rating	Comments
Domain 1: Substance	Metric 1: Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2: Appropriateness	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliability	Metric 3: Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4: Reliability/Analytical Method	Medium	Analytical method is unknown but is likely to be appropriate based on the data's inclusion in a peer-reviewed/recognized database or other secondary source.
Domain 3: Other	Metric 5: Databases	High	Data is from a secondary database with a references to the peer-reviewed original source.
	Metric 6: Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination**High**

* Related References: Data range determined from multiple primary sources in REAXYS.

Study Citation:	Compton, K. L. (2019). Dietary biotransformation and bioaccumulation of cyclic siloxanes in rainbow trout (<i>Oncorhynchus mykiss</i>).
OECD Harmonized Template:	Other Properties
HERO ID:	9960764

EXTRACTION	
Parameter	Data
CASRN and Test Material	556-67-2; D4
Confidentiality, Type, and Guideline	No; Not specified; Not reported
Solvent, Reactivity, Storage, and Stability	Not reported; Not reported; Not reported; Not reported
Radiolabel, Source, State, and Purity	Not reported; Not reported; Not reported; Not reported Notes: Not reported
Results Value	log koa
Results Details	4.29
Results Remarks	Not Reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	The data reported is consistent with the chemicals physical and chemical properties.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	Reliability/Analytical Method	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing elements required for High designation such as peer-review, public availability, or the inclusion of references to original sources.
	Metric 6:	Models	N/A	This metric does not apply to this study type.

Overall Quality Determination

Medium

* Related References: Citing Xu S, Kropscott B. 2013. Octanol/air partition coefficients of volatile methylsiloxanes and their temperature dependence. J. CHEM. ENG. DATA. 58(1):136-142. (HERO ID 2639742)

Study Citation:	SEHSC, (2020). Request for risk evaluation under the Toxic Substances Control Act; Octamethylcyclotetrasiloxane (D4; CASRN: 556-67-2).
OECD Harmonized Template:	Miscellaneous
HERO ID:	7296376

EXTRACTION	
Parameter	Data
CASRN	556-67-2
Confidentiality, Type, and Guideline	none; experimental; Not specified: log K _{oa} (octanol/air partition coefficient)
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	14C-D4; Not Reported; Not Reported; Not Reported
Value	4.22 -
Temperature	24C
System	Octanol and air in a gas-tight syringe
pH	not reported
Standard Deviation Results	not reported
Results Details	HPLC and LSC

		EVALUATION		
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Not in Distiller HERO ID: 6987840 (pdf available) Dow Corning Corporation. 2006a. 1-octanol/air partitioning coefficients of octamethylcyclotetrasiloxane (D4), decamethylcyclopentasiloxane (D5), and dodecamethylcyclohexasiloxane (D6) at different temperatures. HES Study No.: 10163–108. Study Director: Xu. (DOWCO06A)

Study Citation:	SEHSC. (2020). Request for risk evaluation under the Toxic Substances Control Act; Octamethylcyclotetrasiloxane (D4; CASRN: 556-67-2).
OECD Harmonized Template:	Miscellaneous
HERO ID:	7296376

EXTRACTION	
Parameter	Data
CASRN	556-67-2
Confidentiality, Type, and Guideline	none; experimental; Not specified: log K _{oa} (octanol/air partition coefficient)
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported; Not Reported
Value	4.29 -
Temperature	21.7C
System	3-phase equilibrium method
pH	not reported
Standard Deviation Results	not reported
Results Details	not reported

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

* Related References: Source cited HERO ID: 2188633Xu, S., and Kropscott, B. 2012. Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. partition properties. Anal. Chem. 84: 1948-1955. (XU12A)Additional source cited: Not in Distiller HERO ID: 6987898 (pdf available) Dow Corning Corporation. 2007d. Simultaneous Determination of Partition Coefficients for Volatile Cyclic Methylsiloxanes. Dow Corning TIS Report 2007-I0000-58104. Study Director: Xu and Kropscott. (DOWCO07F)

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.
OECD Harmonized Template:	Miscellaneous
HERO ID:	2188633

EXTRACTION	
Parameter	Data
CASRN	Not Reported
Confidentiality, Type, and Guideline	None; Experimental; Based on measured concentrations of the test substance in octanol and air
Solvent, Reactivity, Storage, and Stability	NR; 393 mCi/g; NR; NR
Radiolabel, Source, State, and Purity	C14; Dow Corning; NR; 98.1% Notes: NR
Value	log K _{oa} : 4.28
Temperature	21.7
System	double-syringe apparatus; 2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (mg/L): 1.53e-3; 8.34e-4; dissolved in water saturated 1-octanol in one port; 1-octanol saturated water in other port
pH	NR
Standard Deviation Results	±0.04
Results Details	equilibrium reached at 20 hours; Sampling details: cryogenic cold trap, dry ice acetone bath; transformation products reported to be silanols

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties (e.g., if the physical state is described as a liquid, the substance should have a melting point below 25°C and a boiling point above 25°C) or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

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Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.		
OECD Harmonized Template:	Miscellaneous		
HERO ID:	2188633		
		EVALUATION	
Domain	Metric	Rating	Comments

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.			
OECD Harmonized Template:	Miscellaneous			
HERO ID:	2188633			
EXTRACTION				
Parameter	Data			
CASRN	Not Reported			
Confidentiality, Type, and Guideline	None; Experimental; Based on measured concentrations of the test substance in octanol and air			
Solvent, Reactivity, Storage, and Stability	NR; Not Reported; NR; NR			
Radiolabel, Source, State, and Purity	C14-dimethylsilanediol; specific activity 522.4 mCi/g; Dow Corning; NR; radiochemical purity 98% Notes: NR			
Value	log Koa = 6.40			
Temperature	20.1°C			
System	double-syringe apparatus; 2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (mg/L): 1.53e-3; 8.34e-4; dissolved in water saturated 1-octanol in one port; 1-octanol saturated water in other port			
pH	NR			
Standard Deviation Results	±0.31			
Results Details	equilibrium reached at 20 hours; Sampling details: cryogenic cold trap, dry ice acetone bath			
EVALUATION				
Domain	Metric	Rating	Comments	
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties (e.g., if the physical state is described as a liquid, the substance should have a melting point below 25°C and a boiling point above 25°C) or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology’s objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quality Determination		High		

Study Citation:	Xu, S., Kropscott, B. (2012). Method for simultaneous determination of partition coefficients for cyclic volatile methylsiloxanes and dimethylsilanediol. Analytical Chemistry 84(4):1948-1955.
OECD Harmonized Template:	Miscellaneous
HERO ID:	2188633

EXTRACTION	
Parameter	Data
CASRN	Not Reported
Confidentiality, Type, and Guideline	None; Experimental; Based on measured concentrations of the test substance in octanol and air
Solvent, Reactivity, Storage, and Stability	NR; 393 mCi/g; NR; NR
Radiolabel, Source, State, and Purity	C14; Dow Corning; NR; 98.1% Notes: NR
Value	log K _{oa} : 4.30
Temperature	21.6
System	double-syringe apparatus; 2 air-tight syringes with an air sampling port and a water sampling port; concentration in water (mg/L): 1.53e-3; 8.34e-4; dissolved in water saturated 1-octanol in one port; 1-octanol saturated water in other port
pH	NR
Standard Deviation Results	±0.02
Results Details	equilibrium reached at 20 hours; Sampling details: cryogenic cold trap, dry ice acetone bath; transformation products reported to be silanols

EVALUATION				
Domain	Metric		Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties (e.g., if the physical state is described as a liquid, the substance should have a melting point below 25°C and a boiling point above 25°C) or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

Study Citation:	Xu, S., Kropscott, B. (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12):2702-2710.
OECD Harmonized Template:	Miscellaneous
HERO ID:	2535012

EXTRACTION	
Parameter	Data
CASRN	Not Reported
Confidentiality, Type, and Guideline	None; Experimental; Non-guideline; 3-phase equilibrium method
Solvent, Reactivity, Storage, and Stability	None; 393 mCi/g; NR; NR
Radiolabel, Source, State, and Purity	[C14]D4; Dow Corning; NR; >98% Notes: NR
Value	4.04 - 4.81
Temperature	5.7; 12.2; 21.7; 34.8°C
System	double-syringe apparatus; 2 air-tight syringes with an air sampling port and a water sampling port
pH	NA
Standard Deviation Results	0.02; 0.08; 0.03; 0.07
Results Details	Four log Koa measured = 4.81; 4.53; 4.29; 4.04 Transformation products: silanols; log Koa remained consistent with concentration <0.1 mg/L in 1-octanol; continued increase in total radioactivity attributed to increase concentration of hydrolysis products

EVALUATION				
Domain		Metric	Rating	Comments
Domain 1: Substance	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
	Metric 2:	Appropriateness	High	Measured data are consistent with the subject chemical substance structural features (e.g., presence of certain functional groups) or other physical/chemical properties (e.g., if the physical state is described as a liquid, the substance should have a melting point below 25°C and a boiling point above 25°C) or behaviors.
Domain 2: Test Reliability	Metric 3:	Reliability/Unbiased (Method Objectivity)	High	The methodology for producing the information is designed to answer a specific question, and the methodology's objective is clear.
	Metric 4:	Reliability/Analytical Method	High	Data are obtained by accepted standard analytical methods, including, but not limited to OECD guidelines for physical-chemical properties or other developed standard.
Domain 3: Other	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are peer-reviewed by experts in the field, are broadly available to the public for review and use OR includes references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

High

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Study Citation:	Xu, S., Kropscott, B. (2014). Evaluation of the three-phase equilibrium method for measuring temperature dependence of internally consistent partition coefficients (KOW , KOA , and KAW) for volatile methylsiloxanes and trimethylsilanol. Environmental Toxicology and Chemistry 33(12):2702-2710.		
OECD Harmonized Template:	Miscellaneous		
HERO ID:	2535012		
Domain		EVALUATION Rating	Comments

List of Abbreviations and Acronyms for Data Quality Evaluation and Extraction Tables

Term	Definition
ASTM	American Society for Testing and Materials
ATSDR	Agency for Toxic Substances and Disease Registry
atm	Atmospheres
atm · m ³ /mol	Atmospheres - cubic meters per mole
C	Celsius
CASRN	Chemical Abstract Service registry number
cP	Centipoise
CRC	CRC Handbook of Chemistry and Physics
DOE	U.S. Department of Energy
ECB	European Chemicals Bureau
EPA	Environmental Protection Agency
F	Fahrenheit
GC	Gas Chromatography
g/cm ³	Grams per cubic centimeter
GLP	Good Laboratory Practice
HLC	Henry's Law Constant
HPV	High Production Volume
HSDB	Hazard Substance Data Bank
ILO	International Labour Organization
IPCS	International Programme on Chemical Safety
IUCLID	International Uniform Chemical Information Database
K	Kelvin
K _{oa}	Octanol-Air partition coefficient
K _{ow}	Octanol-Water partition coefficient
mg/L	Milligrams per Liter
mol	Mole
mmHg	Millimeters of Mercury
MS	Mass Spectrometry
N/A	Not Applicable
NICNAS	National Industrial Chemicals Notification and Assessment Scheme
NLM	National Library of Medicine
NR	Not Reported
OECD	Organisation for Economic Co-operation and Development
Pa (hPa)	Pascals (hectopascals; 1 hPa = 100 Pa)
pH	Negative base 10 Log of Hydrogen Ion (H ⁺) Concentration in Aqueous Solution
pK _a	Negative base 10 Log of Acid Dissociation Constant (K _a)
RIVM	National Institute for Public Health and the Environment (Dutch: Rijksinstituut voor Volksgezondheid en Milieu)

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Term	Definition
RSC	Royal Society of Chemistry
RT	Retention Time
SIDs	Screening Information Dataset
VP	Vapor Pressure
US or USA	United States of America
UV (UV-Vis)	Ultra Violet (UV-Visible)
WHO	World Health Organization