

Data Quality Evaluation and Data Extraction Information for Physical and Chemical Properties for Diisononyl Phthalate (DINP)

Systematic Review Support Document for the Risk Evaluation

CASRNs: 28553-12-0 and 68515-48-0

This supplemental file contains information regarding the data extraction and evaluation results for data sources that were considered for the *Risk Evaluation for Diisononyl Phthalate (DINP)* 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 *Risk Evaluation for Diisononyl Phthalate (DINP) – Systematic Review Protocol*. 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.

HERO ID	Reference	Page
Physical Form or State		
3688004	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.	9
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	10
1239562	ExxonMobil, (2001). JAYFLEX® Plasticizers: Jayflex DINP Plasticizer: Diisononyl Phthalate.	11
679849	NTP-CERHR, (2000). NTP-CERHR expert panel report on di-isononyl phthalate. GRA and I(GRA and I):47.	12
3688043	OSHA, (2017). Diisononyl phthalate chemical sampling information.	13
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	14
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	15
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	16
Melting Point		
675060	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.	17
3688004	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.	18
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	19
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	20
3688079	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.	21
680058	Lundberg, G., Nilsson, C. (1994). Phthalic acid esters used as plastic additives: Volume 1. Ecotoxicological risk assessment, Volume 2. Comparisons of toxicological effects. GRA and I(GRA and I):284.	22
6629861	NCBI, (2020). PubChem database: compound summary: diisononyl phthalate.	23
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	24
679849	NTP-CERHR, (2000). NTP-CERHR expert panel report on di-isononyl phthalate. GRA and I(GRA and I):47.	25
680097	NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center for the Evaluation of Risks to Human ReproductionVol(2):i-III90.	26
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	27

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7415500	RSC, (2019). ChemSpider: Diisononyl phthalate (DINP).	28
	KSC, (2019). Chemsphier. Disononyi phinarate (DINF).	20
Boiling Point		
675060	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.	29
3688004	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.	30
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	32
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	33
3688079	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.	34
680058	Lundberg, G., Nilsson, C. (1994). Phthalic acid esters used as plastic additives: Volume 1. Ecotoxicological risk assessment, Volume 2. Comparisons of toxicological effects. GRA and I(GRA and I):284.	35
6629861	NCBI, (2020). PubChem database: compound summary: diisononyl phthalate.	36
679849	NTP-CERHR, (2000). NTP-CERHR expert panel report on di-isononyl phthalate. GRA and I(GRA and I):47.	38
680097	NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center for the Evaluation of Risks to Human ReproductionVol(2):i-III90.	39
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	40
Density		
3688004	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.	41
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	42
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	43
3688079	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.	44
1239562	ExxonMobil, (2001). JAYFLEX® Plasticizers: Jayflex DINP Plasticizer: Diisononyl Phthalate.	45
680058	Lundberg, G., Nilsson, C. (1994). Phthalic acid esters used as plastic additives: Volume 1. Ecotoxicological risk assessment, Volume 2. Comparisons of toxicological effects. GRA and I(GRA and I):284.	46
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680097	NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center for the Evaluation of Risks to Human ReproductionVol(2):i-III90.	48

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1325695	Lorenzi, De, L., Fermeglia, M., Torriano, G. (1998). Density, kinematic viscosity, and refractive index for bis(2-ethylhexyl) adipate, tris(2-ethylhexyl) trimellitate, and diisononyl phthalate. Journal of Chemical and Engineering Data 43(2):183-186.	49
6629861	NCBI, (2020). PubChem database: compound summary: diisononyl phthalate.	50
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	5:
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	52
Particle Size		
Vapor Pressure		
675060	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.	5.
1987625	CPSC, (2010). Toxicity review of Diisononyl Phthalate (DINP).	54
5155508	CPSC, (2015). Exposure assessment: Composition, production, and use of phthalates.	55
3688004	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.	50
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	58
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	59
3688079	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.	60
679985	Howard, P. H., Banerjee, S., Robillard, K. H. (1985). Measurement of water solubilities octanol-water partition coefficients and vapor pressures of commercial phthalate esters. Environmental Toxicology and Chemistry 4(5):653-662.	6:
807140	Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology 83(2):168-173.	62
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	6.
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	64
3688043	OSHA, (2017). Diisononyl phthalate chemical sampling information.	6
2349610	Tomar, R. S., Budroe, J. D., Cendak, R. (2013). Evidence of the carcinogenicity of diisononyl phthalate (DINP).	68
logKow		
675060	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.	69
3688004	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.	70
5353181	EC/HC, (2017). Draft screening assessment: Phthalate substance grouping.	73

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7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	73
3688079	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.	74
807140	Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology 83(2):168-173.	75
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	76
6629895	NLM, (2020). PubChem database: compound summary: Diisodecyl phthalate.	77
679849	NTP-CERHR, (2000). NTP-CERHR expert panel report on di-isononyl phthalate. GRA and I(GRA and I):47.	78
680097	NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center for the Evaluation of Risks to Human ReproductionVol(2):i-III90.	79
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	81
7415500	RSC, (2019). ChemSpider: Diisononyl phthalate (DINP).	82
Water Solubility		
675060	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.	83
3688004	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.	84
5353181	EC/HC, (2017). Draft screening assessment: Phthalate substance grouping.	86
679967	ECETOC, (1985). An assessment of the occurrence and effects of dialkyl ortho-phthalates in the environment.	87
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	88
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	89
3688079	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.	90
679985	Howard, P. H., Banerjee, S., Robillard, K. H. (1985). Measurement of water solubilities octanol-water partition coefficients and vapor pressures of commercial phthalate esters. Environmental Toxicology and Chemistry 4(5):653-662.	91
5348351	Letinski, D. J., Jr, Connelly, M. J., Peterson, D. R., Parkerton, T. F. (2002). Slow-stir water solubility measurements of selected alcohols and diesters. Chemosphere 43(3):257-265.	93
807140	Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology 83(2):168-173.	94

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5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	96
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680097	NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center for the Evaluation of Risks to Human ReproductionVol(2):i-III90.	98
1316216	SRC, (1983). Measurement of the water solubilities of phthalate esters (final report).	100
Flash Point		
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	101
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	102
6629861	NCBI, (2020). PubChem database: compound summary: diisononyl phthalate.	103
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	104
Autoflammability		
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	105
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	106
6629861	NCBI, (2020). PubChem database: compound summary: diisononyl phthalate.	107
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Viscosity		
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	108
7325002	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].	110
2356022	HSDB, (2015). Diisononyl phthalate (CASRN: 28553-12-0).	111
1325695	Lorenzi, De, L., Fermeglia, M., Torriano, G. (1998). Density, kinematic viscosity, and refractive index for bis(2-ethylhexyl) adipate, tris(2-ethylhexyl) trimellitate, and diisononyl phthalate. Journal of Chemical and Engineering Data 43(2):183-186.	112
6629861	NCBI, (2020). PubChem database: compound summary: diisononyl phthalate.	113
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	114
Refractive Index		
3540862	Liu, L., Shen, L., Yang, F., Han, F., Hu, P., Song, M. (2016). Determining Phthalic Acid Esters Using Terahertz Time Domain Spectroscopy. Journal of Applied Spectroscopy 83(4):603-609.	115

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

1325695	Lorenzi, De, L., Fermeglia, M., Torriano, G. (1998). Density, kinematic viscosity, and refractive index for bis(2-ethylhexyl) adipate, tris(2-ethylhexyl) trimellitate, and diisononyl phthalate. Journal of Chemical and Engineering Data 43(2):183-186.	116
5926163	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0.	117
5348358	O'Neil, M. J. (2013). Diisononyl phthalate. :517.	118
Henry's Law		
675060	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.	119
4159647	Cousins, I., Mackay, D. (2000). Correlating the physical–chemical properties of phthalate esters using the 'three solubility' approach. Chemosphere 41(9):1389-1399.	120
2441673	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.	121
807140	Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology 83(2):168-173.	122
Nanomaterial Zeta		
Dielectric Constant		
UV and Visible Absorption		
Other Properties		
807140	Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology 83(2):168-173.	123
Miscellaneous		

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Study Citation:	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.			
OECD Harmonized	Physical Form			Table 1. See Troggody Traineets. 20000 12 0 and 00010 10 0.
Template:	2600004			
HERO ID:	3688004			
_			EXTRACTION	
Parameter		Data		
CASRN and Test Material		28553-12-0 and 68515-48-0; Di-isonon	nyl phthalate	
Confidentiality, Type, and	Guideline	no; experimental; Not Reported	, 1	
Solvent, Reactivity, Storage		NR; NR; NR		
Radiolabel, Source, State, a	and Purity	NR; NR; Liquid; 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 Reliabil	litv			
	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				
2 c 3. Guio	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 Qualit	tv Determi	nation	Medium	

^{*} Related References: referenced to: European Commission. 2000. IUCLID Dataset. Ispra (IT): European Commission, Joint Research Centre, Institute for Health and Consumer Protection, European Chemicals Bureau.

Study Citation: OECD Harmonized	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2]. Physical Form or State			
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			EXTRACTIO	N
Parameter		Data		••
CASRN and Test Material		28533-12-0 and 68515-48-0; Not Report	ed	
Confidentiality, Type, and		No; experimental; Not Reported	cu	
Solvent, Reactivity, Storag		Not Reported; Not Reported; Not Report	ted: Not Reported	
Radiolabel, Source, State,	•	Not Reported; Not Reported; Not Report		
Results Value	y	Clear colorless liquid	,	
Results Details		Measured, Ph. Eur. 2.2.1. and 2.2.2.		
			EVALUATIO	N
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 Reliabi	lity			
	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	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.

^{*} Related References: Referenced to the REACH registration (no HERO ID).

Study Citation:
OECD Harmonized

ExxonMobil, (2001). JAYFLEX® Plasticizers: Jayflex DINP Plasticizer: Diisononyl Phthalate. Physical Form or State

Template:

Parameter

HERO ID: 1239562

$\mathbf{E}\mathbf{X}'$	ΓD	۸(${}^{\mathbf{T}}$	\mathbf{I}	N	

CASRN and Test Material	68515-48-0; Di-isononyl phthalate
Confidentiality, Type, and Guideline	no; experimental; BRCP 4065
Solvent, Reactivity, Storage, and Stability	NA; NA; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Clear and Free; Not Reported

Data

Results Value Clear and Free
Results Details Not Reported

			EVALUATIO	N
Domain		Metric	Rating	Comments
Domain 1: Substance	e			
	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 Relia	ability			
	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	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Qua	lity Determ	ination	High	

Study Citation:	
OECD Harmonized	

NTP-CERHR, (2000). NTP-CERHR expert panel report on di-isononyl phthalate. GRA and I(GRA and I):47. Physical Form or State

Template:

HERO ID: 679849

ACTION

Parameter	Data
CASRN and Test Material	68515-48-0 and 28553-12-0; Di-isononyl phthalate
Confidentiality, Type, and Guideline	No; not specified; NR
Solvent, Reactivity, Storage, and Stability	NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR Notes: NR
Results Value	liquid
Results Details	oily, viscous liquid at standard temperature and pressure

			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 Reliabi	ility			
	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	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	N/A	Rating of this factor is not applicable to this kind of information.

Overall Quality Determination

Medium

Study Citation: OECD Harmonized		OSHA, (2017). Diisononyl phthalate chemical sampling information. Physical Form or State					
Template:	Filysical Folili	of State					
HERO ID:	3688043						
			EXTRACTION				
Parameter		Data					
CASRN and Test Material	1	28553-12-0; Di-isononyl phthalate					
Confidentiality, Type, and	Guideline	no; not specified; NA					
Solvent, Reactivity, Storag	ge, and Stability	NR; NR; NR; NR					
Radiolabel, Source, State,	and Purity	NR; NR; liquid; NR					
Results Value		oily 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 of other physical/chemical properties or behaviors.			
Domain 2: Test Reliabi	ility						
	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 wa used.			
Domain 3: Other							
	Metric 5:	Databases	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.			
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.			

		ık: Di-isononyl	phthalate, 28553-12-0.
5926163			
		EXTRACTIO)N
	Data		
	28553-12-0; Diisononyl phthalate		
Guideline	None; Experimental; Not Reported		
e, and Stability	NR; NR; NR		
and Purity	Not Reported; NR; Liquid; NR		
·	liquid		
	colorless liquid		
		EVALUATIO	N
	Metric	Rating	Comments
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.
ity			
Metric 3:	Reliability/Unbiased	N/A	Rating of this factor is not applicable to this kind of information.
	(Method Objectivity)		
Metric 4:	Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
Metric 5:	Databases	High	Data is from a publicly available and peer-reviewed database.
Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
	Physical Form 5926163 Guideline e, and Stability and Purity Metric 1: Metric 2: ity Metric 3: Metric 4:	Physical Form or State 5926163 Data 28553-12-0; Diisononyl phthalate None; Experimental; Not Reported NR; NR; NR; NR and Purity Not Reported; NR; Liquid; NR liquid colorless liquid Metric Metric 1: Representativeness Metric 2: Appropriateness ity Metric 3: Reliability/Unbiased (Method Objectivity) Metric 4: Reliability/Analytical Method	Data Suideline

^{*} Related References: Haynes, W.M. (Ed.) 2014. CRC Handbook of Chemistry and Physics. CRC Press LLC, Boca Raton: FL 2014. p. 3-194.

Study Citation: OECD Harmonized	O'Neil, M. J. (2013). Diisononyl phthalate. :517. Physical Form or State
Template:	
HERO ID:	5348358

	EXTRACTION
Parameter	Data
CASRN and Test Material	28553-12-0; Diisononyl phthalate
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	Not Reported; NR; Liquid; NR
Results Value	liquid
Results Details	Not Reported

			EVALUATIO	N
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 Reliabi	ility			
	Metric 3:	Reliability/Unbiased	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	(Method Objectivity) Reliability/Analytical Method	N/A	Rating of this factor is not applicable to this kind of information.
		<u> </u>		
Domain 3: Other				
	Metric 5:	Databases	High	Data is from a recognized data collection where data are peer-reviewed by experts in the field.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Study Citation: OECD Harmonized	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0. Physical Form or State			
Template: HERO ID:	5926163			
			EXTRACTIO	N .
Parameter		Data		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	and Purity	Not Reported; NR; Liquid; NR		
Results Details		oily colorless liquid		
			EVALUATIO	N
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 Reliabil	ity			
	Metric 3:	Reliability/Unbiased	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 4:	(Method Objectivity) 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 publicly available and peer-reviewed database.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Qualit	ty Determi	nation	High	

^{*} Related References: Haynes, W.M. (Ed.) 2014. CRC Handbook of Chemistry and Physics. CRC Press LLC, Boca Raton: FL 2014. p. 3-194.

Study Citation:	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.				
OECD Harmonized	Melting Point				
Template: HERO ID:	675060				
			EXTRACTION		
Parameter		Data			
		40.00			
Melting Point		-48 °C	1 1 1 1 .		
CASRN and Test Material	G : 1 1:	28553-12-0 and 68515-48-0; di-isonony	yl phthalate		
Confidentiality, Type, and		none; not specified; Not Reported NR; NR; NR; NR			
Solvent, Reactivity, Storag Radiolabel, Source, State,	-	NR; NR; NR; NR NR; NR; NR; NR			
Results Details Methods	and Purity	Not Reported			
Standard Deviation Results	•	Not Reported			
Results Details	•	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 Reliabil	itv				
	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					
Zeman J. One.	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 Quali	ty Determi	nation	Medium		

^{*} Related References: Cousins, I. T., Mackay, D., Parkerton, T. F.. Physical-chemical properties and evaluative fate modelling of phthalate esters. The Handbook of Environmental Chemistry, vol 3Q. 2003. 3:57-84.

Study Citation:	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.				
OECD Harmonized	Melting Point	ned alkyr esters, ex-rien (Blisolionyr r i	maiate, Dirvi). Chemi	ear Abstracts Service Registry (validees). 20333-12-0 and 00313-40-0.	
Template: HERO ID:	3688004				
TIERO ID	3000001		EVTDACTION		
Parameter		Data	EXTRACTION		
Tarameter		Data			
Melting Point		-5434 °C			
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isonon	vl phthalate		
Confidentiality, Type, and	Guideline	no; experimental; Not Reported	, r		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR			
Radiolabel, Source, State, a	and Purity	NR; NR; Liquid; NR			
Results Details Methods		Not Reported			
Standard Deviation Results	S	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.	
Domain 2: Test Reliabil	lity				
	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	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 Qualit	ty Determi	nation	Medium		

^{*} Related References: referenced to: European Commission. 2000. IUCLID Dataset. Ispra (IT): European Commission, Joint Research Centre, Institute for Health and Consumer Protection, European Chemicals Bureau.

Study Citation:	ECHA, (2013). 1907/2006.	Evaluation of new scientific evidence of	concerning DINP and D	IDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No
OECD Harmonized	Melting Point			
Template:	C			
HERO ID:	2441673			
			EXTRACTION	
Parameter		Data		
Melting Point		ca -50 °C		
CASRN and Test Material		28553-12-0 and 68515-48-0; DINP		
Confidentiality, Type, and C	Guideline	no; calculation; Not Reported		
Solvent, Reactivity, Storage		NR; NR; NR		
Radiolabel, Source, State, a	•	NR; NR; NR; NR		
Results Details Methods	and I direy	Not Reported		
Standard Deviation Results	4	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 Reliabil	ity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
	3.6	(Method Objectivity)	3.6.12	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	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 Qualit	ty Determi	nation	Medium	

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation:	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1]					
OECD Harmonized Template:		CAS Number: 68515-48-0 [1] 28553-12-0	•			
HERO ID:	7325002					
			EXTRACTION			
Parameter		Data				
Melting Point		-54 deg C				
CASRN and Test Material	[28533-12-0; Diisononyl phthalate				
Confidentiality, Type, and	Guideline	No; experimental; ASTM D 97-02				
Solvent, Reactivity, Storag	ge, and Stability	Not Reported; Not Reported; Not Reporte	d; Not Reported			
Radiolabel, Source, State,	and Purity	Not Reported; Not Reported; Not Reporte	d; Not Reported			
Results Details Methods at 1 atm						
Standard Deviation Result	S	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 Reliabi	lity					
	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	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 Quali	ty Determi	ination	NEED TO FIX			

 $^{^{\}star}$ Related References: Referenced to the REACH registration (no HERO ID).

Study Citation:		EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.				
OECD Harmonized	Melting Point	remed to an isonony ipinimime (DIM)	or ase in 100 a co	maet materials. Question 11 12 5/1 q 2005 17 1. 12 5/1 Journal 244(7),1-10.		
Template:						
HERO ID:	3688079					
			EXTRACTIO	N		
Parameter		Data				
Melting Point		ca50 °C				
CASRN and Test Material	I	28553-12-0 and 68515-48-0; di-isononyl	phthalate			
Confidentiality, Type, and	Guideline	no; not specified; Not Reported	•			
Solvent, Reactivity, Storag	ge, and Stability	NR; NR; NR; NR				
Radiolabel, Source, State,	•	NR; NR; NR; NR				
Results Details Methods	Methods Not Reported					
Standard Deviation Result	ts	Not Reported				
Results Details		Not Reported				
			EVALUATIO	N		
Domain		Metric	Rating	Comments		
Domain 1: Substance						
	Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.		
	Metric 2:	Appropriateness	Medium	Rating of this factor is not applicable to this kind of information.		
Domain 2: Test Reliabi	litv					
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
		(Method Objectivity)		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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.		
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.		

Study Citation:	Lundberg, G., Nilsson, C. (1994). Phthalic acid esters used as plastic additives: Volume 1. Ecotoxicological risk assessment, Volume 2. Comparisons of toxicological effects. GRA and I(GRA and I):284.				
OECD Harmonized	Melting Point	frects. GRA and I(GRA and I):284.			
Template:	8				
HERO ID:	680058				
			EXTRACTIO	N	
Parameter		Data			
Melting Point		-4948 °C			
CASRN and Test Material	l	28553-12-0 and 68515-48-0; diisononyl	phthalate		
Confidentiality, Type, and		no; not specified; Not Reported			
Solvent, Reactivity, Storag	•	NR; NR; NR; NR			
Radiolabel, Source, State,	and Purity	NR; NR; liquid; NR Notes: DINP			
Results Details Methods		Not Reported			
Standard Deviation Result	is	Not Reported			
Results Details		Not Reported			
			EVALUATIO	N	
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 Reliabi	litv				
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased	
		(Method Objectivity)		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					
Domain J. Outer	Metric 5:	Databases	Low	The data are from a primary source without expert peer-review or an unknown sec-	
	wichie J.	Databases	Low	ondary source without peer-review and references to the original sources.	
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.	
Overall Quali	ty Dotormi	ingtion	Low		
Over an Quan	ty Determin	เมลมงม	LUW		

^{*} Related References: References BASF sicherheitsblatt-march 1983 and Jayflex (Esso) varuinformation 1980.

Study Citation: OECD Harmonized	Melting Point	PubChem database: compound summary:	. unsononyi pilui	
Template: HERO ID:	6629861			
11110 121	002/001		EXTRACTIO	N
Parameter		Data	EATRACTIO	
Maria Brita		40.00		
Melting Point		-43 °C		
CASRN and Test Material	Suitautuu	28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and C		None; Experimental; Not Reported NR; NR; NR; NR		
Solvent, Reactivity, Storage Radiolabel, Source, State, a	•	NR; NR; NR; NR Not Reported; NR; Liquid; NR		
Results Details Methods	ilid Fullty	Not Reported Not Reported		
Standard Deviation Results		Not Reported		
Results Details		Not Reported		
			EVALUATIO	
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 Reliabili	ity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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.
0 110 114	D. ()	.•	TT. 1	
Overall Qualit	y Determi	nation	High	

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

Study Citation: OECD Harmonized	NLM, (2015). I Melting Point	PubChem: Hazardous Substance Data Ba	nk: D1-1sononyl _]	onthalate, 28553-12-0.
Template: HERO ID:	5926163			
ILKO ID.	3720103		EXTRACTIO	N
Parameter		Data	EATRACTIO	
Melting Point		-48 °C		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not Reported		
Solvent, Reactivity, Storag	ge, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	Not Reported; NR; Liquid; NR		
Results Details Methods		Not Reported		
Standard Deviation Result	S	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabi	lity			
	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				
Zomani J. Onioi	Metric 5:	Databases	High	Data is from a publicly available, peer-reviewed database that provides references to a recognized data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

^{*} Related References: O'Neil, M.J. (Ed.) 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. P. 598

Study Citation: OECD Harmonized	NTP-CERHR, Melting Point	(2000). NTP-CERHR expert panel report	on di-isononyl phthal	ate. GRA and I(GRA and I):47.
Template:	-			
HERO ID:	679849			
			EXTRACTION	
Parameter		Data		
Melting Point		-48 - deg C		
CASRN and Test Material		68515-48-0 and 28553-12-0; Di-isononyl	phthalate	
Confidentiality, Type, and C	Guideline	No; not specified; NR		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	and Purity	NR; NR; NR; NR Notes: NR		
Results Details Methods		NR		
Standard Deviation Results	3	NR		
Results Details		NR		
			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.
Domain 2: Test Reliabil	itv			
	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	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 Qualit	ty Determi	nation	Medium	

^{*} Related References: Citing Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID 675437.

Study Citation:		NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center for the Evaluation of Risks to Human ReproductionVol(2):i-III90.				
OECD Harmonized	Melting Point	ion of Kisks to Human Reproduction Vol(2	∠).1-1119U.			
Template: HERO ID:	680097					
			EXTRACTIO	N		
Parameter		Data				
Melting Point		-48 °C				
CASRN and Test Material		68515-48-0 and 28553-12-0; Di-isonony	l Phthalate			
Confidentiality, Type, and C	Guideline	no; not specified; Not Reported				
Solvent, Reactivity, Storage	, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported			
Radiolabel, Source, State, a	nd Purity	Not Reported; Not Reported; Not Report	ted; Not Reported			
Results Details Methods		Not Reported				
Standard Deviation Results		Not Reported				
Results Details		Not Reported				
			EVALUATIO	N		
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 Reliabili	tv					
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
		(Method Objectivity)		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 Qualit	v Determi	nation	High			

^{*} Related References: Cited source: Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: Aliterature review. Chemosphere 35:667-749(1997). HERO ID: 675437

Study Citation: OECD Harmonized	O'Neil, M. J. (2 Melting Point	013). Diisononyl phthalate. :517.		
Template: HERO ID:	5348358			
			EXTRACTIO	N
Parameter		Data		
Melting Point		-48 °C		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not Reported		
Solvent, Reactivity, Storag		NR; NR; NR		
Radiolabel, Source, State,		Not Reported; NR; Liquid; NR		
Results Details Methods	·	Not Reported		
Standard Deviation Result	s	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabi	lity			
	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.

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation: OECD Harmonized	RSC, (2019). C Melting Point	hemSpider: Diisononyl phthalate (DIN	NP).	
Template:	Weiting I omit			
HERO ID:	7415500			
			EXTRACTIO	N
Parameter		Data		
Melting Point		-48 - °C		
CASRN and Test Material		Not Reported; DINP		
Confidentiality, Type, and C	Guideline	None; Not specified; NR		
Solvent, Reactivity, Storage	, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	nd Purity	NR; NR; NR; NR Notes: NR		
Results Details Methods		NA		
Standard Deviation Results		NA		
Results Details		NA		
			EVALUATIO	N
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 Reliabili	ity			
	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	Data is from a publicly available secondary source with references to non-peer reviewed sources; however, the value was also cited to a trusted database, Physprop, under CAS 28553-12-0.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

^{*} Related References: Citing Jean-Claude Bradley Open Melting Point Dataset, which cites Physprop (for CAS 28553-12-0).

Study Citation:				em-Lunden, E. (2007). Results from the Swedish National Screening Programme
OECD Harmonized	Boiling Point	t 1: Phthalates. GRA and I(GRA and I):	39.	
Template:				
HERO ID:	675060			
			EXTRACTIO	N
Parameter		Data		
Boiling Point		> 400 - C		
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isonony	yl phthalate	
Confidentiality, Type, and	Guideline	none; not specified; Not Reported	1	
Solvent, Reactivity, Storage		NR; NR; NR		
Radiolabel, Source, State, a	and Purity	None; NR; NR; NR		
Standard Deviation Results	3	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabil	ity			
	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Qualit	ty Determi	nation	Low	

^{*} Related References: reference is given as EU RA with no further information

Study Citation:		EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.				
OECD Harmonized	Boiling Point	ned alkyl esters, C9-fich (Dhsoholiyi Fi	itilalate, DINI). Chellin	cal Austracts Service Registry Numbers. 20333-12-0 and 00313-40-0.		
Template: HERO ID:	3688004					
			EXTRACTION			
Parameter		Data				
Boiling Point		> 400 C				
CASRN and Test Material		68515-48-0; di-isononyl phthalate				
Confidentiality, Type, and	Guideline	no; experimental; Not Reported				
Solvent, Reactivity, Storag		NR; NR; NR				
Radiolabel, Source, State,	and Purity	NR; NR; Liquid; NR				
Standard Deviation Results	s	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.		
Domain 2: Test Reliabil	litv					
	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	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 Quali	ty Determi	nation	Medium			

^{*} Related References: European Chemicals Agency. 2014. Registered Substances database. Search results for CAS RNs [28553-12-0 and 68515-48-0]. Helsinki (FI): ECHA.

OECD Harmonized	di-C8-10-branci						
ara at marmonized	di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0. Boiling Point						
Template:	Doming I ome						
HERO ID:	3688004						
			EXTRACTION				
Parameter		Data					
Boiling Point		331 - 341 C					
CASRN and Test Material		28553-12-0; di-isononyl phthalate					
Confidentiality, Type, and G	uideline	no; experimental; Not Reported					
Solvent, Reactivity, Storage,	, and Stability	NR; NR; NR; NR					
Radiolabel, Source, State, ar	nd Purity	NR; NR; Liquid; 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 (e.g., presence of certain functional groups) or other physical/chemical properties.			
Domain 2: Test Reliabili	ty						
	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	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.			

^{*} Related References: referenced to: European Chemicals Agency. 2014. Registered Substances database. Search results for CAS RNs [28553-12-0 and 68515-48-0]. Helsinki (FI): ECHA.

Study Citation:		Evaluation of new scientific evidence of	concerning DINP and D	DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No
OECD Harmonized	1907/2006. Boiling Point			
Template:				
HERO ID:	2441673			
			EXTRACTION	
Parameter		Data		
Boiling Point		> 400 - C		
CASRN and Test Material		28553-12-0 and 68515-48-0; DINP		
Confidentiality, Type, and C	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storage	, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	nd 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.
Domain 2: Test Reliabili	ty			
	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				
3 3 3 3 4 5 5	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.

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation: OECD Harmonized	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2]. Boiling Point				
Template:	Bonnig I om				
HERO ID:	7325002				
			EXTRACTIO	N	
Parameter		Data			
Boiling Point		> 400 - °C			
CASRN and Test Material		28533-12-0 and 68515-48-0; Diisononyl	phthalate		
Confidentiality, Type, and	Guideline	No; calculation; Not Reported			
Solvent, Reactivity, Storage	e, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported		
Radiolabel, Source, State, a	and Purity	Not Reported; Not Reported; Not Report	ted; Not Reported		
Standard Deviation Results	S	Not Reported			
Results Details		at 1 atm			
			EVALUATIO	N .	
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 Reliabil	lity				
	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	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 Qualit	tv Determi	nation	High		

^{*} Related References: Referenced to the REACH registration (no HERO ID).

Study Citation:	EFSA, (2005).	Opinion of the scientific panel on food ac	dditives, flavouri	ngs, processing aids and materials in contact with food (AFC) on a request from	
•	the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 2440				
OECD Harmonized	Boiling Point				
Template:	2 < 0.00 = 0				
HERO ID:	3688079				
			EXTRACTIO	N	
Parameter		Data			
Boiling Point		> 400 - C			
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isononyl	phthalate		
Confidentiality, Type, and	Guideline	no; not specified; Not Reported	•		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR			
Radiolabel, Source, State, a	and Purity	NR; NR; NR; NR			
Standard Deviation Results		Not Reported			
Results Details		Not Reported			
			EVALUATION	N .	
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	Rating of this factor is not applicable to this kind of information.	
Domain 2: Test Reliabil	ity				
	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.	
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.	
Overall Qualit	D 4	4.	Low		

Study Citation:	dy Citation: Lundberg, G., Nilsson, C. (1994). Phthalic acid esters used as plastic additives: Volume 1. Ecotoxicological risk assessment, Volume toxicological effects. GRA and I(GRA and I):284.							
OECD Harmonized	Boiling Point							
Template:								
HERO ID:	680058							
			EXTRACTIO	N				
Parameter		Data						
Boiling Point		252 C						
CASRN and Test Material		28553-12-0 and 68515-48-0; diisononyl	phthalate					
Confidentiality, Type, and	Guideline	none; not specified; not reported	•					
Solvent, Reactivity, Storag		NR; NR; NR						
Radiolabel, Source, State,	and Purity	NR; NR; liquid; NR Notes: DINP						
Standard Deviation Results	s	Not Reported						
Results Details		Not Reported						
			EVALUATIO	N				
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 Reliabil	lity							
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased				
		(Method Objectivity)		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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.				
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.				

^{*} Related References: References: Jayflex (Esso) varuinformation 1980

Study Citation: OECD Harmonized	NCBI, (2020). I Boiling Point	PubChem database: compound summar	ry: diisononyl phthalate.	
Template:	Boiling Folia			
HERO ID:	6629861			
HERO ID:	0029801			
			EXTRACTION	
Parameter		Data		
Boiling Point		78 C		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR Notes: DINP		
Standard Deviation Results	S	Not Reported		
Results Details		reported as 172 F at 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	Low	Data measured for a structural analogue of the subject chemical substance are not consistent with the subject chemical substance structural properties, features or behaviors, or the structural features or behaviors of the subject chemical substance are uncertain.
Domain 2: Test Reliabi	lity			
	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.

^{*} Related References: U.S. Coast Guard. 1999. Chemical Hazard Response Information System (CHRIS) - Hazardous Chemical Data. Commandant Instruction 16465.12C. Washington, D.C.: U.S.Government Printing Office.

Study Citation: OECD Harmonized	NCBI, (2020). Boiling Point	PubChem database: compound summar	y: diisononyl phth	alate.
Template: HERO ID:	6629861			
			EXTRACTIO	N
Parameter		Data		
Boiling Point		244 - 252 C		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and C	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	•	NR; NR; NR Notes: DINP		
Standard Deviation Results		Not reported		
Results Details		at 0.7 kPa		
			EVALUATIO	N
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) [and/or] other physical/chemical properties.
Domain 2: Test Reliabili	itv			
	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 Qualit	v Determi	nation	High	

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

Study Citation: OECD Harmonized		(2000). NTP-CERHR expert panel report of	on di-isononyl phtha	ate. GRA and I(GRA and I):47.
Template:	Boiling Point			
HERO ID:	679849			
HERO ID.	077047			
.			EXTRACTION	
Parameter		Data		
Boiling Point		370 deg C		
CASRN and Test Material		68515-48-0 and 28553-12-0; Di-isononyl	phthalate	
Confidentiality, Type, and	Guideline	No; not specified; NR		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	and Purity	NR; NR; NR; NR Notes: NR		
Standard Deviation Results	•	NR		
Results Details		NR		
			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.
Domain 2: Test Reliabil	itv			
	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	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.

^{*} Related References: Citing Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID 675437.

Study Citation:	NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center for the Evaluation of Risks to Human ReproductionVol(2):i-III90.			
OECD Harmonized	for the Evaluati Boiling Point	on of Risks to Human ReproductionVol(2):i-III90.	
Template:	Boiling Foliit			
HERO ID:	680097			
			EXTRACTIO	NI
Parameter		Data	EATRACTIO	N
Boiling Point		370 C		
CASRN and Test Material		68515-48-0 and 28553-12-0; Di-isononyl	l Phthalate	
Confidentiality, Type, and C	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storage	e, and Stability	Not Reported; Not Reported; Not Report	ed; Not Reported	
Radiolabel, Source, State, a	and Purity	Not Reported; Not Reported; Not Report	ed; Not Reported	
Standard Deviation Results		Not Reported	•	
Results Details		Not Reported		
			EVALUATIO	N.
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 Reliabili	ity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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				
Domain 3. Ouici	Metric 5:	Databases	High	The information or data is from a recognized data collection/repository where data are
	ivicule J.	Datauases	mgn	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 Qualit	ty Determi	nation	High	

^{*} Related References: Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID: 675437

Study Citation: OECD Harmonized	O'Neil, M. J. (2 Boiling Point	013). Diisononyl phthalate. :517.		
Template:	_			
HERO ID:	5348358			
			EXTRACTIO	N
Parameter		Data		
Boiling Point		252 C		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and C		None; Experimental; Not Reported		
Solvent, Reactivity, Storage	-	NR; NR; NR		
Radiolabel, Source, State, a		Not Reported; NR; Liquid; NR		
Standard Deviation Results		Not Reported		
Results Details		at 5 torr		
			EVALUATIO	N
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 Reliabil	itv			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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 Qualit	ty Determi	nation	High	

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation:		EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.						
OECD Harmonized	Density	ned alkyresters, C5-nen (Dhsononyi i nun	iaiate, Dirvi). Chemi	cal Abstracts Service Registry Numbers. 20000-12-0 and 00010-40-0.				
Template:								
HERO ID:	3688004							
			EXTRACTION					
Parameter		Data						
Density		0.967 - 0.983 g/cm3						
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isononyl	phthalate					
Confidentiality, Type, and	Guideline	no; experimental; Not Reported	1					
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR						
Radiolabel, Source, State, a	-	NR; NR; liquid; NR						
Density Type	·	density						
System Not Reported								
Temperature		Not Reported	·					
Standard Deviation Results	3	Not Reported						
Results Details		reported as 967-983 kg/m3						
			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 Reliabil	itv							
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased				
		(Method Objectivity)		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	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.				

^{*} Related References: referenced to: European Commission. 2000. IUCLID Dataset. Ispra (IT): European Commission, Joint Research Centre, Institute for Health and Consumer Protection, European Chemicals Bureau.

Study Citation:	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No				
OECD Harmonized	1907/2006. Density				
Template:					
HERO ID:	2441673				
			EXTRACTION		
Parameter		Data			
Density		ca 0.975			
CASRN and Test Material		28553-12-0 and 68515-48-0; DINP			
Confidentiality, Type, and	Guideline	no; not specified; Not Reported			
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR			
Radiolabel, Source, State, a	and Purity	NR; NR; NR; NR			
Density Type		density			
System		Not Reported			
Temperature		20°C			
Standard Deviation Results	3	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 Reliabil	ity				
	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	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 Qualit	ty Determi	ination	Medium		

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation: OECD Harmonized	at EU level of 1		ranched alkylest	round document to the Opinion proposing harmonised classification and labelling ers, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1]
Template:	·			
HERO ID:	7325002			
			EXTRACTIO	N
Parameter		Data		
Density		0.97 g/cm³		
CASRN and Test Material		28533-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	No; experimental; OECD TG 109		
Solvent, Reactivity, Storag	ge, and Stability	Not Reported; Not Reported; Not Report	ed; Not Reported	
Radiolabel, Source, State,	and Purity	Not Reported; Not Reported; Not Report	ed; Not Reported	
Density Type		density		
System		Not Reported		
Temperature		20 °C		
Standard Deviation Result	S	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N .
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 Reliabi	lity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		towards a particular product or outcome.
	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.

 $^{^{\}star}$ Related References: Referenced to the REACH registration (no HERO ID).

Study Citation: OECD Harmonized				ngs, processing aids and materials in contact with food (AFC) on a request from ntact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.
Template: HERO ID:	3688079			
HERO ID.	3088079			•
Parameter		Data	EXTRACTIO	N
rarameter		Data		
Density		ca. 0.975		
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isonony	l phthalate	
Confidentiality, Type, and		no; Not Reported; Not Reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR		
Density Type		density		
System		Not Reported		
Temperature		20°C		
Standard Deviation Results	S	Not Reported		
Results Details		Not Reported		
			EVALUATION	N
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 Reliabil	ity			
	Metric 3:	Reliability/Unbiased	Medium	Rating of this factor is not applicable to this kind of information.
		(Method Objectivity)		
	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Low

Overall Quality Determination

Study Citation: OECD Harmonized	ExxonMobil, (2 Density	2001). JAYFLEX® Plasticizers: Jayflex E	DINP Plasticizer:	Diisononyl Phthalate.
Template: HERO ID:	1239562			
			EXTRACTIO	N
Parameter		Data		
Density		0.971 - 0.975		
CASRN and Test Material		68515-48-0; Di-isononyl phthalate		
Confidentiality, Type, and	Guideline	no; experimental; BRCP 4843		
Solvent, Reactivity, Storage	e, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported	
Radiolabel, Source, State, a		Not Reported; Not Reported; Not Report	ted; Not Reported	
Density Type		Specific Gravity		
System		BRCP 4843		
Temperature		20 C/20 C		
Standard Deviation Results	;	Not Reported		
Results Details		Not Reported		
			EVALUATION	N
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 Reliabil	ity			
	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	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Qualit	ty Dotormi	nation	High	

Study Citation:		Lundberg, G., Nilsson, C. (1994). Phthalic acid esters used as plastic additives: Volume 1. Ecotoxicological risk assessment, Volume 2. Comparisons of toxicological effects. GRA and I(GRA and I):284.				
OECD Harmonized	Density	iects. GRA and I(GRA and I).204.				
Template: HERO ID:	680058					
			EXTRACTIO	N		
Parameter		Data				
Density		0.972 - 0.975 g/cm3				
CASRN and Test Material		28553-12-0 and 68515-48-0; diisononyl	phthalate			
Confidentiality, Type, and	Guideline	no; not specified; Not Reported	•			
Solvent, Reactivity, Storag		NR; NR; NR				
Radiolabel, Source, State,	and Purity	NR; NR; liquid; NR Notes: DINP				
Density Type		density				
System		Not Reported				
Temperature		Not Reported				
Standard Deviation Results	s	Not Reported				
Results Details		Not Reported				
			EVALUATIO	N		
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 Reliabil	lity					
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
	Metric 4:	(Method Objectivity) Reliability/Analytical Method	Low	towards a particular product or outcome. The analytical method is unknown and there is no indication that a reliable method was used.		
Domain 3: Other						
	Metric 5:	Databases	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.		
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.		
Overall Quali	tv Determi	nation	Low			

^{*} Related References: References BASF sicherheitsblatt-march 1983 and Jayflex (Esso) varuinformation 1980.

Study Citation: OECD Harmonized Template:	NTP-CERHR, Density	(2000). NTP-CERHR expert panel report	on di-isononyl phthal	late. GRA and I(GRA and I):47.
HERO ID:	679849			
			EXTRACTION	
Parameter		Data		
Density		0.97		
CASRN and Test Material		68515-48-0 and 28553-12-0; Di-isononyl	phthalate	
Confidentiality, Type, and	Guideline	No; not specified; NR		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR Notes: NR		
Density Type		Density		
System		NR		
Temperature		NR		
Standard Deviation Results	S	NR		
Results Details		specific gravity		
			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 Reliabil	lity			
	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	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 Quali	ty Determi	nation	Medium	

^{*} Related References: Citing Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID 675437.

Study Citation:				reproductive and developmental effects of di-isononyl phthalate (DINP). Center
OECD Harmonized	for the Evaluation Density	on of Risks to Human ReproductionVol	2):i-III90.	
Template:	Demony			
HERO ID:	680097			
			EXTRACTIO	N
Parameter		Data		
Density		= 0.97 -		
CASRN and Test Material		Not Reported; Di-isononyl Phthalate		
Confidentiality, Type, and C	Guideline	none; not specified; not specified		
Solvent, Reactivity, Storage		Not Reported; Not Reported; Not Repor	ted; Not Reported	
Radiolabel, Source, State, a	•	Not Reported; Not Reported; Not Repor	_	
Density Type	-	Specific Gravity		
System		not specified		
Temperature		not specified		
Standard Deviation Results		not specified		
Results Details		not specified		
			EVALUATIO	N
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.
				below 23 C and a boining point above 23 C) of behaviors.
Domain 2: Test Reliabil	ity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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	36.1.6	D. J.	***	
	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 Qualit	y Determi	nation	High	

^{*} Related References: Cited source: Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: Aliterature review. Chemosphere 35:667-749(1997). HERO ID: 675437

Study Citation:	Lorenzi, De, L., Fermeglia, M., Torriano, G. (1998). Density, kinematic viscosity, and refractive index for bis(2-ethylhexyl) adipate, tris(2-ethylhexyl) trimellitate, and diisononyl phthalate. Journal of Chemical and Engineering Data 43(2):183-186.					
OECD Harmonized	Density	i diisononyi pinnarate. Journar of Chemic	ai and Engineern	ig Data 45(2).165-160.		
Template:						
HERO ID:	1325695					
			EXTRACTIO	N		
Parameter		Data				
Density		0.97578 g/cm3				
CASRN and Test Material		28553-12-0; Diisononyl phthalate				
Confidentiality, Type, and		None; Experimental; Not Reported				
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR				
Radiolabel, Source, State,	and Purity	NR; Aldrich; NR; 99% mixture of C9 iso	omers, 0.15% maxi	mum impurity (dioctyl phthalate) Notes: No further purification.		
Temperature		293.15 K				
Standard Deviation Results	S	Not Reported				
Results Details	Interpolated value at 293.15 K. Value derived from measurements taken between 287.90 through 366.12 K. Density experimental data (g cm-0.97943 at 287.90 K, 0.97187 at 298.15 K, 0.96607 at 308.22 K, 0.95739 at 318.10 K, 0.95003 at 328.17 K, 0.94308 at 338.44 K, 0.93674 348.01 K, 0.92889 at 358.91 K, 0.92396 at 366.12 K.					
			EVALUATIO	N		
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 Reliabil	ity					
	Metric 3:	Reliability/Unbiased	High	The methodology for producing the information is designed to answer a specific ques-		
		(Method Objectivity)		tion, 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	High	Data is from a peer-reviewed data collection.		
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.		

Study Citation: OECD Harmonized		PubChem database: compound summar	y: diisononyl phth	alate.
Template:	Density			
HERO ID:	6629861			
	002,001		EVED A CETO	NI .
Parameter		Data	EXTRACTIO	IN .
rarameter		Data		
Density		0.98		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	none; Experimental; Not reported		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR		
Radiolabel, Source, State,		NR; NR; NR Notes: DINP		
Temperature		Not Reported		
Standard Deviation Result	S	Not reported		
Results Details		relative density: water = 1		
			EVALUATIO	N .
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 Reliabi	lity			
	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.

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

Study Citation: OECD Harmonized	NLM, (2015). I Density	PubChem: Hazardous Substance Data Bar	nk: Di-isononyl _J	phthalate, 28553-12-0.
Template:				
HERO ID:	5926163			
			EXTRACTIO	N
Parameter		Data		
Density		0.972 g/cm3		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and C	Guideline	None; Experimental; Not Reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	and Purity	Not Reported; NR; Liquid; NR		
Temperature		20 deg C		
Standard Deviation Results	3	Not Reported		
Results Details		20 deg C		
			EVALUATIO	N
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 Reliabil	ity			
	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 publicly available, peer-reviewed database that provides references to a peer-reviewed data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

^{*} Related References: O'Neil, M.J. (Ed.) 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. P. 598

OECD Harmonized Template: HERO ID:	Density 5348358
Parameter	Data

EXTRACTIO	ľ

r ai ainetei	Data
Density	0.972 g/cm3
CASRN and Test Material	28553-12-0; Diisononyl phthalate
Confidentiality, Type, and Guideline	None; Experimental; Not Reported
Solvent, Reactivity, Storage, and Stability	NR; NR; NR
Radiolabel, Source, State, and Purity	Not Reported; NR; Liquid; NR
Temperature	20°C
Standard Deviation Results	Not Reported
Results Details	at 20°C relative to water at 20°C

			EVALUATIO	N
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 Reliabi	ility			
	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.

Page	52	of	125	

Study Citation:		Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.				
OECD Harmonized Template:	Vapor Pressure					
HERO ID:	675060					
			EXTRACTION			
Parameter		Data				
Vapor Pressure		6.8X10-6 Pa				
CASRN and Test Material		28553-12-0 and 68515-48-0; id-isononyl p	ohthalate			
Confidentiality, Type, and		none; not specified; Not Reported				
Solvent, Reactivity, Storag		NR; NR; NR; NR				
Radiolabel, Source, State,	and Purity	None; NR; NR; NR				
Temperature		Not Reported				
System		Not Reported				
Standard Deviation Results	S	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 Reliabil	lity					
	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	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 Quali	ty Determi	ination	Medium			

^{*} Related References: Cousins, I. T., Mackay, D., Parkerton, T. F.. Physical-chemical properties and evaluative fate modelling of phthalate esters. The Handbook of Environmental Chemistry, vol 3Q. 2003. 3:57-84.

Study Citation: OECD Harmonized	CPSC, (2010). Vapor Pressure	Toxicity review of Diisononyl Phthalate	(DINP).	
Template:	vapor r ressure			
HERO ID:	1987625			
ILKO ID.	1707025		EVEDACTION	
Parameter		Data	EXTRACTION	
1 at afficter		Data		
Vapor Pressure		5x10^-7 mm Hg		
CASRN and Test Material		28553-12-0 and 68515-48-0; Di-isonony	yl phthalate	
Confidentiality, Type, and	Guideline	no; not specified; NR		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR Notes: NR		
Temperature		NR		
System		NR		
Standard Deviation Results	S	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	Medium	Data measured for a structural analogue of the subject chemical substance are consistent with what is expected for the subject chemical substance structural properties, features or behaviors.
Domain 2: Test Reliabil	lity			
	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 Quali			Medium	

^{*} Related References: Citing Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID 675437.

Study Citation: OECD Harmonized	CPSC, (2015). Vapor Pressure	Exposure assessment: Composition, produ	action, and use of pho	thalates.
Template:				
HERO ID:	5155508			
			EXTRACTION	
Parameter		Data		
Vapor Pressure		6x10-8 - 3.8x10-5 kPa		
CASRN and Test Material		28553-12-0 and 68515-48-0; di-iso-nonyl	phthalate	
Confidentiality, Type, and	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	and Purity	NR; NR; liquid; NR		
Temperature		20°C		
System		Not Reported		
Standard Deviation Results	S	Not Reported		
Results Details		Not Reported		
			EVALUATION	
Domain		Metric	Rating	Comments
Domain 1: Substance				
	Metric 1:	Representativeness	High	The data are measured for the subject chemical substance.
	Metric 2:	Appropriateness	High	Data are consistent with other reported physical properties.
Domain 2: Test Reliabil	ity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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 secondary source without peer-review.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Qualit	tv Determi	nation	Medium	

^{*} Related References: Cal EPA (California Environmental Protection Agency), 2013. Evidence on the carcinogenicity of Diisononyl Phthalate (DINP). Office of Environmental Health Hazard Assessment's (OEHHA), Reproductive and Cancer Hazard Assessment Branch. Cal EPA, California, 2013.

Study Citation:		EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.				
OECD Harmonized	Vapor Pressure		anace, Dir ii). Chellin	tal riosaucus service region y riamoets. 20333-12 0 and 00313-40-0.		
Template: HERO ID:	3688004					
			EXTRACTION			
Parameter		Data				
Vapor Pressure		6.7X10-5 Pa				
CASRN and Test Material	I	28553-12-0 and 68515-48-0; di-isononyl	phthalate			
Confidentiality, Type, and		none; experimental; Not Reported				
Solvent, Reactivity, Storag		NR; NR; NR; NR				
Radiolabel, Source, State,	and Purity	NR; NR; liquid; NR				
Temperature		25°C				
System		Not Reported				
Standard Deviation Result	ts	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.		
Domain 2: Test Reliabi	lity					
	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	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 Quali	ty Determi	nation	Medium			

^{*} Related References: referenced to HEROID: 675437 Staples CA, Peterson DR, Parkerton TF, Adams WJ. 1997. The environmental fate of phthalate esters: A literature review. Chemosphere 35(4):667-749.HEROID: 534354 Mackay D, Shiu WY, Ma KC, Lee SC. 2006. Handbook of physical-chemical properties and environmental fate for organic chemicals. 2nd edition. Volume III. Oxygen containing compounds. Boca Raton (FL): CRC Press, Taylor & Francis Group.

Study Citation:				Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, cal Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.
OECD Harmonized	Vapor Pressure			120000000000000000000000000000000000000
Template:	-			
HERO ID:	3688004			
			EXTRACTION	
Parameter		Data		
Vapor Pressure		6.0X10-5 Pa		
CASRN and Test Material		68515-48-0; di-isononyl phthalate		
Confidentiality, Type, and	Guideline	none; experimental; Not Reported		
Solvent, Reactivity, Storag		NR; NR; NR		
Radiolabel, Source, State,		NR; NR; liquid; NR		
Temperature	•	20°C		
System		Not Reported		
Standard Deviation Results	S	Not Reported		
Results Details		Not Reported		
			EVALUATION	
Domain		Metric	Rating	Comments
Domain 1: Substance			<u> </u>	
	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.
Domain 2: Test Reliabil	lity			
	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				
Zomani J. Oulei	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 Quali	ty Determi	nation	Medium	

^{*} Related References: referenced to: European Chemicals Agency. 2014. Registered Substances database. Search results for CAS RNs [28553-12-0 and 68515-48-0]. Helsinki (FI): ECHA.

O6. ressure Data 6x10-5 Pa 28553-12-0 and 68515-48-0; no; not specified; Not Reported NR; NR; NR; NR NR; NR; NR; NR 20°C Not Reported Not Reported Not Reported Not Reported Not Reported Metric	EVALUATION	
Data 6x10-5 Pa 28553-12-0 and 68515-48-0; no; not specified; Not Reported NR; NR; NR; NR NR; NR; NR 20°C Not Reported Not Reported Not Reported	DINP ed EVALUATION	
Data 6x10-5 Pa 28553-12-0 and 68515-48-0; no; not specified; Not Reported NR; NR; NR; NR NR; NR; NR 20°C Not Reported Not Reported Not Reported	DINP ed EVALUATION	
6x10-5 Pa 28553-12-0 and 68515-48-0; no; not specified; Not Reported NR; NR; NR; NR NR; NR; NR 20°C Not Reported Not Reported Not Reported Not Reported	DINP ed EVALUATION	
6x10-5 Pa 28553-12-0 and 68515-48-0; no; not specified; Not Reported NR; NR; NR; NR NR; NR; NR 20°C Not Reported Not Reported Not Reported Not Reported	EVALUATION	
28553-12-0 and 68515-48-0; no; not specified; Not Reported NR; NR; NR; NR NR; NR; NR 20°C Not Reported Not Reported Not Reported	EVALUATION	
no; not specified; Not Reported NR; NR; NR; NR NR; NR; NR 20°C Not Reported Not Reported Not Reported	EVALUATION	
lity NR; NR; NR; NR NR; NR; NR; NR 20°C Not Reported Not Reported Not Reported	EVALUATION	
NR; NR; NR 20°C Not Reported Not Reported Not Reported		
20°C Not Reported Not Reported Not Reported		
Not Reported Not Reported Not Reported		
Not Reported Not Reported		
Not Reported		
Metric		
Metric	Dotino	
	Rating	Comments
D	TT: 1	
: Representativeness	High	Data are measured or estimated for the subject chemical substance.
2: Appropriateness	High	Measured data are consistent with the subject chemical substance structural features.
	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	thod 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.
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.
6: Models	N/A	Rating of this factor is not applicable to this kind of information.
4	5: Databases	(Method Objectivity) 4: Reliability/Analytical Method Medium 5: Databases Medium 6: Models N/A

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation: OECD Harmonized	at EU level of 1	,2-Benzenedicarboxylic acid, di-C8-10-b CAS Number: 68515-48-0 [1] 28553-12-0	ranched alkylest	round document to the Opinion proposing harmonised classification and labelling ers, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1]
Template:	vapor i ressare			
HERO ID:	7325002			
ILIKO ID.	7323002		EXTRACTIO	N.
Parameter		Data	EATRACTIO	
Vapor Pressure		0.00006 Pa		
CASRN and Test Material		28533-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	No; experimental; NR		
Solvent, Reactivity, Storag	ge, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported	
Radiolabel, Source, State,	and Purity	Not Reported; Not Reported; Not Report	ted; Not Reported	
Temperature		20 °C		
System		Not Reported		
Standard Deviation Result	S	Not Reported		
Results Details		Not Reported		
			EVALUATIO	
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.
				oner physical chemical properties of behaviors.
Domain 2: Test Reliabi	•	D 1: 1:1: #I 1: 1	3.6.12	
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	(Method Objectivity) 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 Quali	tv Determi	nation	High	

^{*} Related References: Referenced to the REACH registration (no HERO ID).

Study Citation:	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from
	the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.
OECD Harmonized	Vapor Pressure
Template:	
HERO ID:	3688079

EXTRACTION		
Parameter	Data	
Vapor Pressure	6.10-5 Pa	
CASRN and Test Material	28553-12-0 and 68515-48-0; di-isononyl phthalate	
Confidentiality, Type, and Guideline	no; not specified; Not Reported	
Solvent, Reactivity, Storage, and Stability	NR; NR; NR	
Radiolabel, Source, State, and Purity	NR; NR; NR	
Temperature	20°C	
System	Not Reported	
Standard Deviation Results	Not Reported	
Results Details	Reported as 6.10-5 Pa at 20 °C. Assumed a typo and should have been 6.10E-5 Pa at 20 °C.	

			EVALUATIO	N
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	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliab	oility			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Qual	ity Determ	ination	Low	

Study Citation:	Howard, P. H., Banerjee, S., Robillard, K. H. (1985).	Measurement of water solubilities octanol-water partition coefficients and vapor pressures of
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commercial phthalate esters. Environmental Toxicology and Chemistry 4(5):653-662. Vapor Pressure

OECD Harmonized Template:

HERO ID: 679985

EXTRACTION				
Parameter	Data			
Vapor Pressure	5.4E-7 mm Hg			
CASRN and Test Material	28553-12-0; Di-isononyl phthalate			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; If more than one manufacturer produced the individual PAE, the PAE product provided to us was an equal-proportion blend			
Radiolabel, Source, State, and Purity	NR; Provided to Chemical Manufacturers' Association by U.S. manufacturers.; NR; Each sample contained less than 1 % of non-PAE material, as determined by another laboratory. Notes: mixture of 4 isomers at 26% C18, 8% C18, 28% C18, and 38% C18-19			
Temperature	25°C			
System	Measured by the gas saturation method: U.S. Environmental Protection Agency. 1980. Environmental test standards: Proposed rules. Vapor pressure. Fed. Reg. 45:77345-77350.			
Standard Deviation Results	0.9E-5			
Results Details	Value reported as 7.2E-5 Pa			

			EVALUATIO	N
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 other physical/chemical properties.
Domain 2: Test Reliab	oility			
	Metric 3:	Reliability/Unbiased	High	Peer-reviewed journal article with results compared to other literature values.
		(Method Objectivity)		
	Metric 4:	Reliability/Analytical Method	High	Standard method used with experimental details reported.
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.

Study Citation: Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology

83(2):168-173.

OECD Harmonized Template:

Vapor Pressure

HERO ID:

807140

DIVIDE	ACCITANT	

	EXTRACTION
Parameter	Data
Vapor Pressure	1.28X10-5 Pa
CASRN and Test Material	28553-12-0; diisononyl phthalate
Confidentiality, Type, and Guideline	none; QSAR; Quantitative Structure-Property relationship model for estimation of solubility in air
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR Notes: DINP
Temperature	Not Reported
System	Predictive model developed using gas law: $S(A) = P(liquid substance)/RT$ where $R = gas constant (8.314 Pa m-3 mol-1 K-1) and T = absolute temperature (298K); Log S(A) = -0.2324 - 0.3215 (Lu)$
Standard Deviation Results	Not Reported
Results Details	Log S(A): $n = 15$; correlation coefficient (R) = 0.9461; standard error (SE) = 0.27; leave-one-out cross validation correlation coefficient (Rsv) = 0.9218; corresponding standard errors (scv) = 0.34

			EVALUATIO	N
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 Reliab	oility			
	Metric 3:	Reliability/Unbiased	N/A	Rating of this factor is not applicable to this kind of information.
		(Method Objectivity)		
	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	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	High	The model had a defined, unambiguous endpoint AND the model performance was known and $\rm r2>0.7, q2>0.5,$ and $\rm SE<0.3$ (ECHA, 2016).

Overall Quality Determination High

Study Citation: OECD Harmonized	NLM, (2015). F Vapor Pressure	PubChem: Hazardous Substance Data Ba	nk: Di-isononyl _l	ohthalate, 28553-12-0.
Template: HERO ID:	5926163			
			EXTRACTIO	N
Parameter		Data		
Vapor Pressure		5.4E-7 mm Hg		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and G	duideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage	, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	nd Purity	Not Reported; NR; Liquid; NR		
Temperature		25°C		
System		Not Reported		
Standard Deviation Results		Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabili	ty			
	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 publicly available, peer-reviewed database that provides references to original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Qualit	v Dotormi	nation	High	

^{*} Related References: Howard, P.H. et al. 1985. Environ Toxicol Chem 4: 653-61

Study Citation: OECD Harmonized	O'Neil, M. J. (2 Vapor Pressure	2013). Diisononyl phthalate. :517.		
Template:	_			
HERO ID:	5348358			
			EXTRACTIO	N
Parameter		Data		
Vapor Pressure		0.0018 mm Hg		
CASRN and Test Material	[28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storag	ge, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	Not Reported; NR; Liquid; NR		
Temperature		100°C		
System		Not Reported		
Standard Deviation Result	S	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabi	lity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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 peer-reviewed data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
0 11 0 11	4 D 4		TT. 1	
Overall Quali	ty Determi	ination	High	

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation: OECD Harmonized	O'Neil, M. J. (2 Vapor Pressure	2013). Diisononyl phthalate. :517.		
Template: HERO ID:	5348358			
			EXTRACTIO	N
Parameter		Data		
Vapor Pressure		0.50 mm Hg		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storag	ge, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	Not Reported; NR; Liquid; NR		
Temperature		200°C		
System		Not Reported		
Standard Deviation Result	s	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabi	lity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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 peer-reviewed data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quali	ty Determi	nation	High	
C, Crain Quan	ij Determi	IIWIIVII	111811	

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation: OECD Harmonized Template:	O'Neil, M. J. (2 Vapor Pressure	2013). Diisononyl phthalate. :517.		
HERO ID:	5348358			
			EXTRACTIO)N
Parameter		Data		
Vapor Pressure		40 mm Hg		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	Not Reported; NR; Liquid; NR		
Temperature		300°C		
System		Not Reported		
Standard Deviation Results	S	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabil	lity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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 peer-reviewed data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quali	ty Determi	nation	High	

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation: OECD Harmonized	OSHA, (2017). Vapor Pressure	Diisononyl phthalate chemical samplir	ng information.	
Template: HERO ID:	3688043			
			EXTRACTION	
Parameter		Data		
Vapor Pressure		< 0.01 Pa		
CASRN and Test Material		28553-12-0; di-isononyl phthalate		
Confidentiality, Type, and	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storag		NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; liquid; NR		
Temperature		20C		
System		not reported		
Standard Deviation Results	S	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 Reliabil	litv			
	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quali	ty Determi	nation	Medium	

Study Citation:		udroe, J. D., Cendak, R. (2013). Evidence	of the carcinogenici	ty of diisononyl phthalate (DINP).		
OECD Harmonized Template:	Vapor Pressure					
HERO ID:	2349610					
HERO ID:	2349010					
			EXTRACTION			
Parameter		Data				
Vapor Pressure		6x10^-8 - 3.8×10^-5 KPa				
CASRN and Test Material		28553-12-0 and 68515-48-0; Di-isononyl p	ohthalate			
Confidentiality, Type, and	Guideline	no; Calculation; NR				
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR				
Radiolabel, Source, State, a	and Purity	NR; NR; NR; NR				
Temperature		20o C				
System		NR				
Standard Deviation Results		Not Reported				
Results Details		5.4×10^-7 mm Hg (25 deg C) also reported citing U.S. EPA (2005a). Revised Technical Review of Diisononyl Phthalate. Office of Environmental Information, Environmental Analysis Division, Analytical Support Branch. March 2005.				
			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	Medium	Data measured for a structural analogue of the subject chemical substance are consister with what is expected for the subject chemical substance structural properties, features or behaviors.		
Domain 2: Test Reliabil	ity					
	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 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	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.		

^{*} Related References: Citing CPSC (2010). Consumer Product Safety Commission. Toxicity review of diisononyl phthalate (DINP) HERO ID: 1987625.

Overall Quality Determination

Medium

Study Citation:	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme 2006. Subreport 1: Phthalates. GRA and I(GRA and I):39.				
OECD Harmonized	logKow	t 1: Philialates. GRA and I(GRA and I):59	9.		
Template: HERO ID:	675060				
ILINO ID	072000		EXTRACTION		
Parameter		Data	EATRACTION		
log k		8.6			
log k _{ow} CASRN and Test Material		28553-12-0 and 68515-48-0; di-isononyl	nhthalate		
Confidentiality, Type, and		none; not specified; Not Reported	phinalace		
Solvent, Reactivity, Storag		NR; NR; NR			
Radiolabel, Source, State,	-	None; NR; NR; NR			
Temperature		Not Reported			
System		Not Reported			
рH		Not Reported			
Results Details Method		Not Reported			
Standard Deviation Results	s	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 Reliabil	lity				
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.	
	Metric 4:	(Method Objectivity) 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					
2 3 3 3 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4 4	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 Quali	tv Determi	nation	Medium		

^{*} Related References: Cousins, I. T., Mackay, D., Parkerton, T. F.. Physical-chemical properties and evaluative fate modelling of phthalate esters. The Handbook of Environmental Chemistry, vol 3Q. 2003. 3:57-84.

Study Citation:	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.				
OECD Harmonized	logKow	med arkyr esters, C9-fich (Dhsononyr Phina	arate; DINP). Chemi	cai Abstracts Service Registry Numbers: 28555-12-0 and 08515-48-0.	
Template:	logitow				
HERO ID:	3688004				
			EXTRACTION		
Parameter		Data			
log k _{ow}		8.8 - 9.7			
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isononyl p	ohthalate		
Confidentiality, Type, and		no; experimental; Not Reported			
Solvent, Reactivity, Storag		NR; NR; NR			
Radiolabel, Source, State,	-	NR; NR; liquid; NR			
Temperature	•	Not Reported			
System		Not Reported			
pН		Not Reported			
Results Details Method		Not Reported			
Standard Deviation Results	s	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.	
Domain 2: Test Reliabil	•				
	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					
Domain 3. Oute	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 Quali	ty Determi	nation	Medium		

^{*} Related References: referenced to: European Chemicals Agency. 2014. Registered Substances database. Search results for CAS RNs [28553-12-0 and 68515-48-0]. Helsinki (FI): ECHA.

Study Citation: OECD Harmonized	EC/HC, (2017) logKow	. Draft screening assessment: Phthalate st	ubstance groupin	g.
Template:	logitow			
HERO ID:	5353181			
			EXTRACTIO	N
Parameter		Data		
$\log k_{ow}$		>= 8.8 - <= 9.7		
CASRN and Test Material		68515-48-0 and 28553-12-0; Dibutyl ph	thalate	
Confidentiality, Type, and		none; experimental; not specified		
Solvent, Reactivity, Storag		NR; NR; NR		
Radiolabel, Source, State,		NR; NR; NR; NR		
Temperature	,	not specified		
System		not specified		
pH		not specified		
Results Details Method		not specified		
Standard Deviation Result	s	not specified		
Results Details		not specified		
Domain		Metric	EVALUATIO Rating	N Comments
Domain 1: Substance		Metric	Kanng	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.
	Wictife 2.	Appropriateness	Ingn	Measured data are consistent with the subject entitled substance structural reactives.
Domain 2: Test Reliabi	lity			
	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 Quali	ty Determi	ination	High	
Over an Quan	is Determine	manvii	ıngıı	

^{*} Related References: Source cited: ECHA c2007-2015b

Study Citation:	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No				
OECD Harmonized	1907/2006. logKow				
Template:					
HERO ID:	2441673				
			EXTRACTION		
Parameter		Data			
$\log k_{ow}$		8.8			
CASRN and Test Material		28553-12-0; DINP			
Confidentiality, Type, and	Guideline	no; not specified; Not Reported			
Solvent, Reactivity, Storage		NR; NR; NR			
Radiolabel, Source, State, a		NR; NR; NR; NR			
Temperature	and I arrey	Not Reported			
System		Not Reported			
pH		Not Reported			
Results Details Method		Not Reported			
Standard Deviation Results	3	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 Reliabil	its				
Domain 2. Test Kenaun	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased	
	Metric 3.	(Method Objectivity)	Wicdiani	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.	
D : 2 04					
Domain 3: Other	M-4	D-4-1	M.J.		
	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 Qualit	ty Determi	nation	Medium		

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation: OECD Harmonized	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2]. logKow						
Template:	J						
HERO ID:	7325002						
			EXTRACTIO	N			
Parameter		Data					
log k _{ow}		8.8 - 9.7					
CASRN and Test Material		28533-12-0; Diisononyl phthalate					
Confidentiality, Type, and	Guideline	No; experimental; OECD TG 117					
Solvent, Reactivity, Storag	e, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported				
Radiolabel, Source, State,	and Purity	Not Reported; Not Reported; Not Report	ted; Not Reported				
Temperature		25 °C					
System		Not Reported					
pН		Not Reported					
Results Details Method		Not Reported					
Standard Deviation Results	;	Not Reported					
Results Details		Not Reported					
			EVALUATIO	N			
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 Reliabil	ity						
	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	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.			

 $^{^{\}star}$ Related References: Referenced to the REACH registration (no HERO ID).

Study Citation:	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.					
OECD Harmonized	logKow	related to di-isonolly philialate (DINI) to	or use in rood co.	inact materials. Question iv Er SA-q-2003-194. Er SA Journal 244(7).1-16.		
Template:	2.000=0					
HERO ID:	3688079					
			EXTRACTIO	N		
Parameter		Data				
log k _{ow}		8.8				
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isononyl	nhthalate			
Confidentiality, Type, and (Guideline	no; not specified; Not Reported	phinarate			
Solvent, Reactivity, Storage		NR; NR; NR				
Radiolabel, Source, State, and Purity NR; NR; NR						
Temperature						
System		Not Reported				
pН		Not Reported				
Results Details Method		Not Reported				
Standard Deviation Results		Not Reported				
Results Details		Not Reported				
			EVALUATION	N		
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	Rating of this factor is not applicable to this kind of information.		
Domain 2: Test Reliabil	ity					
2. Test Rendon	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
		(Method Objectivity)	1.10010111	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.		
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.		
Overall Qualit		4.	Low			

Study Citation:	Lu, C. (2009). Prediction of env	ironmental properties in water-	-soil-air systems for phthalates.	Bulletin of Environmental Contamination and Toxicology

83(2):168-173.

OECD Harmonized

logKow

Template:

HERO ID: 807140

EVTD	٨	CTION

Parameter	Data
$\log k_{ow}$	8.52
CASRN and Test Material	28553-12-0; diisononyl phthalate
Confidentiality, Type, and Guideline	none; QSAR; Quantitative Structure-Property relationship model for estimation of log Kow
Solvent, Reactivity, Storage, and Stability	NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR Notes: DINP
Temperature	not applicable
System	QSPR model using the Lu index, which is based on the shortest distance matrix.
pH	not applicable
Results Details Method	Predictive model developed using Lu index: Log Kow = -4.7875 + 0.5315 (Lu)
Standard Deviation Results	Not Reported
Results Details	n = 15; correlation coefficient (R) = 0.9836; standard error (SE) = 0.40; leave-one-out cross validation correlation coefficient (Rsv) = 0.9784; corresponding standarderrors (scv) = 0.47

			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 Reliab	ility			
	Metric 3:	Reliability/Unbiased	N/A	Rating of this factor is not applicable to this kind of information.
		(Method Objectivity)		
	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	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	Uninformative	The QSPR model failed the standard error threshold of $<$ 0.3 and is therefore rated unacceptable.

Overall Quality Determination

Study Citation: OECD Harmonized	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0. logKow					
Template:						
HERO ID:	5926163					
			EXTRACTIO	N		
Parameter		Data				
log k _{ow}		9.37				
CASRN and Test Material		28553-12-0; Diisononyl phthalate				
Confidentiality, Type, and		None; Experimental; Not Reported				
Solvent, Reactivity, Storag		NR; NR; NR				
Radiolabel, Source, State,		Not Reported; NR; Liquid; NR				
Temperature	and rainty	Not Reported				
System		Not Reported				
pH		Not Reported				
Results Details Method		Not Reported				
Standard Deviation Result	S	Not Reported				
Results Details		Not Reported				
			EVALUATIO	N		
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 Reliabi	lity					
_ J 2. 105t Rendon	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
		(Method Objectivity)		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						
Domain J. Outer	Metric 5:	Databases	High	Data is from a publicly available database that provides references to a peer-reviewed source.		
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.		
Overall Quali	tv Determi	ination	High			
C, Ci all Quali		IIIWIIVII	***8**			

^{*} Related References: O'Neil, M.J. (Ed.) 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. P. 598

Study Citation: OECD Harmonized	NLM, (2020). l logKow	PubChem database: compound summary	: Diisodecyl phthalate.	
Template:				
HERO ID:	6629895			
			EXTRACTION	
Parameter		Data		
$\log k_{ow}$		10.36		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Not reported; Not Reported		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR Notes: DINP		
Temperature		Not reported		
System		Not reported		
pН		Not reported		
Results Details Method		Not reported		
Standard Deviation Result	S	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	Medium	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; however this is estimated data.
Domain 2: Test Reliabi	lity			
	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	N/A	This metric is not applicable to this calculated data.
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 is not applicable to this calculated data.
Overall Quali	tv Determi	nation	Medium	

^{*} Related References: US EPA; Estimation Program Interface (EPI) Suite. Ver.3.12. Nov 30, 2004. Available from, as of Apr 23, 2008.

Study Citation: OECD Harmonized		(2000). NTP-CERHR expert panel report of	on di-isononyl phtha	ate. GRA and I(GRA and I):47.
Template:	logKow			
HERO ID:	679849			
			EXTRACTION	
Parameter		Data		
log k _{ow}		approx. 9 -		
CASRN and Test Material		68515-48-0 and 28553-12-0; Di-isononyl	phthalate	
Confidentiality, Type, and		No; not specified; NR		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR Notes: NR		
Temperature		NR		
System		NR		
pН		NR		
Results Details Method		NR		
Standard Deviation Results	s	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 (e.g., presence of certain functional groups) or other physical/chemical properties.
Domain 2: Test Reliabil	lity			
	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				
Domain J. Oulei	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 Quali			Medium	rating of this factor is not approvate to this kind of information.

^{*} Related References: Citing Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID 675437.

Study Citation:	NTP-CERHR, (2003). NTP-CERHR monograph on the pot	tential human reproductive and developmental effect	s of di-isononyl phthalate (DINP). Center

for the Evaluation of Risks to Human ReproductionVol(2):i-III90.

OECD Harmonized Template:

logKow

EXTRACTION						
Parameter		Data				
log k _{ow}		9				
CASRN and Test Material		68515-48-0 and 28553-12-0; Di-isonony	l Phthalate			
Confidentiality, Type, and Gu	ideline	no; not specified; Not Reported				
Solvent, Reactivity, Storage,	and Stability	Not Reported; Not Reported; Not Report	ed; Not Reported			
Radiolabel, Source, State, and	l Purity	Not Reported; Not Reported; Not Report	ed; Not Reported			
Temperature		Not Reported				
System		Not Reported				
pН		Not Reported				
Results Details Method		Not Reported				
Standard Deviation Results		Not Reported				
Results Details		Not Reported				
			EVALUATIO	N		
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	I					
	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.		

... continued from previous page

Study Citation:	, , ,		developmental effects of di-isononyl phthalate (DINP). Center
OECD Harmonized	for the Evaluation of Risks to Human Reprod logKow	uctionVol(2):i-III90.	
Template:			
HERO ID:	680097		
		EVALUATION	
Domain	Metric	Rating	Comments

		EVALUATION		
Domain	Metric	Rating	Comments	
Overall Quality Determination		High		

^{*} Related References: Cited source: Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID: 675437

Study Citation: OECD Harmonized	O'Neil, M. J. (2 logKow	2013). Diisononyl phthalate. :517.		
Template: HERO ID:	5348358			
			EXTRACTIO	N
Parameter		Data		
$\log k_{ow}$		9.37		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and C	Guideline	None; Experimental; Not Reported		
Solvent, Reactivity, Storage		NR; NR; NR		
Radiolabel, Source, State, a		Not Reported; NR; Liquid; NR		
Temperature		Not Reported		
System		Not Reported		
pH		Not Reported		
Results Details Method		Not Reported		
Standard Deviation Results	;	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabil	itv			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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 Qualit	tv Determi	nation	High	

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation: OECD Harmonized Template:	RSC, (2019). ClogKow	hemSpider: Diisononyl phthalate (DIN	P).	
HERO ID:	7415500			
			EXTRACTION	
Parameter		Data	LATE TO IV	
$\log k_{ow}$		9.214		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and C	Guideline	None; Not reported; Not Reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	-	NR; NR; NR; NR Notes: DINP		
Temperature	•	Not reported		
System		Not reported		
рH		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	Medium	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; however it is not clear if this data is measured or calculated.
Domain 2: Test Reliabil	ity			
	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	N/A	This metric is not applicable to this calculated data.
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 is not applicable to this calculated data.
Overall Qualit	v Dotormi	nation	Medium	

^{*} Related References: LabNetwork

Study Citation: OECD Harmonized		rt 1: Phthalates. GRA and I(GRA and I):39		Lunden, E. (2007). Results from the Swedish National Screening Programme
Template: HERO ID:	675060			
	0,000		EXTRACTION	
Parameter		Data	EXTRACTION	
Water Solubility CASRN and Test Material		3.08X10-4 mg/L 28553-12-0 and 68515-48-0; di-isononyl p	ohthalate	
Confidentiality, Type, and		none; not specified; Not Reported	on that are to	
Solvent, Reactivity, Storag		NR; NR; NR		
Radiolabel, Source, State,	and Purity	None; NR; NR; NR		
Temperature		Not Reported		
System		Not Reported		
pH		Not Reported		
Results Details Method		Not Reported		
Standard Deviation Results	S	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 Reliabil	lity			
	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	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

^{*} Related References: Cousins, I. T., Mackay, D., Parkerton, T. F.. Physical-chemical properties and evaluative fate modelling of phthalate esters. The Handbook of Environmental Chemistry, vol 3Q. 2003. 3:57-84.

Study Citation:	EC/HC, (2015). State of the science report: Phthalate substance grouping 1,2-Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkyl esters, C9-rich (Diisononyl Phthalate; DINP). Chemical Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.						
OECD Harmonized	Water Solubility			<i>.</i>			
Template:							
HERO ID:	3688004						
			EXTRACTION				
Parameter		Data					
Water Solubility		< 0.001 mg/L					
CASRN and Test Material		28553-12-0; di-isononyl phthalate					
Confidentiality, Type, and	Guideline	no; experimental; Not Reported					
Solvent, Reactivity, Storag	-	NR; NR; NR; NR					
Radiolabel, Source, State,	and Purity	NR; NR; liquid; NR					
Temperature		25°C					
System		Not Reported					
pH		Not Reported					
Results Details Method		Not Reported					
Standard Deviation Results	S	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.			
Domain 2: Test Reliabil	lity						
	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	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.			

^{*} Related References: referenced to HEROID: 675437 Staples CA, Peterson DR, Parkerton TF, Adams WJ. 1997. The environmental fate of phthalate esters: A literature review. Chemosphere 35(4):667-749.HEROID: 534354 Mackay D, Shiu WY, Ma KC, Lee SC. 2006. Handbook of physical-chemical properties and environmental fate for organic chemicals. 2nd edition. Volume III. Oxygen containing compounds. Boca Raton (FL): CRC Press, Taylor & Francis Group.

Study Citation:				Benzenedicarboxylic acid, diisononyl ester; 1,2-Benzenedicarboxylic acid, cal Abstracts Service Registry Numbers: 28553-12-0 and 68515-48-0.
OECD Harmonized	Water Solubility		naiate, DinF). Chenno	cai Abstracts Service Registry Inditiders. 20333-12-0 and 00313-40-0.
Template:	2699004			
HERO ID:	3688004			
n .		D	EXTRACTION	
Parameter		Data		
Water Solubility		6.0X10-4 mg/L		
CASRN and Test Material		68515-48-0; di-isononyl phthalate		
Confidentiality, Type, and	Guideline	no; experimental; Not Reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	and Purity	NR; NR; liquid; NR		
Temperature		20°C		
System		Not Reported		
pН		Not Reported		
Results Details Method		Not Reported		
Standard Deviation Results	S	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.
Domain 2: Test Reliabil	lity			
	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 2. Other				
Domain 3: Other	Matria 5	Databasas	Madina	The date are from a course that is known but it wis in a large transit of the IV 1
	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 Quali	tv Determi	nation	Medium	

^{*} Related References: referenced to: European Chemicals Agency. 2014. Registered Substances database. Search results for CAS RNs [28553-12-0 and 68515-48-0]. Helsinki (FI): ECHA.

Study Citation:	EC/HC, (2017).	Draft screening assessment: Phthalate s	ubstance groupin	ıg.
OECD Harmonized	Water Solubility	-		
Template:	•			
HERO ID:	5353181			
			EXTRACTIO	N
Parameter		Data		
Water Solubility		6.0E-4 mg/L		
CASRN and Test Material		68515-48-0 and 28553-12-0; diisononyl	phthalate	
Confidentiality, Type, and C	Guideline	no; experimental; Not Reported	1	
Solvent, Reactivity, Storage		NR; NR; NR		
Radiolabel, Source, State, and Purity		NR; NR; NR		
Temperature	•	not specified		
System		not specified		
pН		not specified		
Results Details Method		not specified		
Standard Deviation Results		not specified		
Results Details		not specified		
			EVALUATIO	N
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 Reliabil	ity			
	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				
2 smail 5. Stilet	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 Qualit	ty Determi	nation	High	

^{*} Related References: Source cited: ECHA c2007-2015b

Study Citation: OECD Harmonized	ECETOC, (198 Water Solubility	5). An assessment of the occurrence and e	effects of dialkyl orth	o-phthalates in the environment.		
Template:	······································					
HERO ID:	679967					
			EXTRACTION			
Parameter		Data				
Water Solubility		0.2E3 ug/L				
CASRN and Test Material		Not Reported; DINP				
Confidentiality, Type, and	Guideline	No; not specified; Not Reported				
Solvent, Reactivity, Storag		Not Reported; Not Reported; Not Reported	ed: Not Reported			
Radiolabel, Source, State,	-	Not Reported; Not Reported; Not Reported	-			
Temperature	•	25 deg C	, 1			
System	·					
рH	Not Reported					
Results Details Method						
Standard Deviation Results	S	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 Reliabil	lity					
	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						
_ Sman S. Outer	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 Quali	ty Determi	nation	Medium			

^{*} Related References: Citing CMA (1983). Measurement of the water-solubility of phthalate esters. Final report, Contract PE-11. 0-WS-SRL. Ll533-06, Syracuse Res. Corp., April, 1983. No HERO ID.

G. 1 Gt. :	EGILA (2017)	T 1 6		TDD: 1.1		
Study Citation:		ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No				
OECD Harmonized	1907/2006. Water Solubility	y				
Template:		•				
HERO ID:	2441673					
			EXTRACTION			
Parameter		Data				
Water Solubility		0.0006 mg/L				
CASRN and Test Material		28553-12-0 and 68515-48-0; DINP				
Confidentiality, Type, and		no; not specified; Not Reported				
Solvent, Reactivity, Storage, and Stability		NR; NR; NR				
Radiolabel, Source, State,	and Purity	NR; NR; NR				
Temperature		20°C				
System		Not Reported				
pH Results Details Method		Not Reported Not Reported				
Standard Deviation Result	c	Not Reported				
Results Details	5	Reported as 0.6 μ g/L				
Results Details		reported as 0.0 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.		
Domain 2: Test Reliabi	lity					
Domain 2. Test Rendor	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
	Wedle 3.	(Method Objectivity)	1/10dfdff	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.		
D						
Domain 3: Other	Metric 5:	Databases	Medium	The date are from a course that is known but is missing alaments as will discuss it.		
	Metric 5:	Databases	ivieaium	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.		
Overell Ovel	ty Dotom:	nation	Medium			
Overall Quali	ty Determi	แลนงแ	Mediulli			

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation:	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].				
OECD Harmonized	Water Solubility	y			
Template:					
HERO ID:	7325002				
			EXTRACTIO	N	
Parameter		Data			
Water Solubility		0.6 μg/L			
CASRN and Test Material		68515-48-0; Diisononyl phthalate			
Confidentiality, Type, and	Guideline	No; experimental; OECD TG 105			
Solvent, Reactivity, Storag	e, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported		
Radiolabel, Source, State,	•	Not Reported; Not Reported; Not Report	•		
Temperature	·	21 °C			
System		Not Reported			
pН		NR			
Results Details Method		Not Reported			
Standard Deviation Results	S	Not Reported			
Results Details		Not Reported			
			EVALUATIO	N	
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 Reliabil	lity				
	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	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.	

^{*} Related References: Referenced to the REACH registration (no HERO ID).

Study Citation:	EFSA, (2005). Opinion of the scientific panel on food additives, flavourings, processing aids and materials in contact with food (AFC) on a request from the commission related to di-isononylphthalate (DINP) for use in food contact materials. Question N° EFSA-q-2003-194. EFSA Journal 244(9):1-18.					
OECD Harmonized	Water Solubility					
Template: HERO ID:	3688079					
	EXTRACTION					
Parameter	Data					
Water Solubility	0.6 μg/L					
CASRN and Test Material 28553-12-0 and 68515-48-0; di-isononyl phthalate						
Confidentiality, Type, and	Guideline no; not specified; Not Reported					
Solvent, Reactivity, Storag	e, and Stability NR; NR; NR					
Radiolabel, Source, State,	nd Purity NR; NR; NR; NR					

Radiolabel, Source, State, and Purity	NR; NR; NR; NR
Temperature	20°C
System	Not Reported
pH	Not Reported
Results Details Method	Not Reported
Standard Deviation Results	Not Reported
Results Details	Not Reported

			EVALUATIO	N
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	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliab	ility			
	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	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

Study Citation: Howard, P. H., Banerjee, S., Robillard, K. H. (1985). Measurement of water solubilities octanol-water partition coefficients and vapor pressures of

commercial phthalate esters. Environmental Toxicology and Chemistry 4(5):653-662.

OECD Harmonized

Water Solubility

Template:

HERO ID: 679985

EXTRACTION				
Parameter	Data			
Water Solubility	0.2 mg/L			
CASRN and Test Material	28553-12-0; Di-isononyl phthalate			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; If more than one manufacturer produced the individual PAE, the PAE product provided to us was an equal-proportion blend			
Radiolabel, Source, State, and Purity	NR; Provided to Chemical Manufacturers' Association by U.S. manufacturers.; NR; Each sample contained less than 1 % of non-PAE material, as determined by another laboratory. Notes: mixture of 4 isomers at 26% C18, 8% C18, 28% C18, and 38% C18-19			
Temperature	25°C			
System	Protocol was designed to meet or exceed the requirements of the EPA-recommended procedure stated in U.S. Environmental Protection Agency. 1979. TSCA premanufacture testing of new chemical substances: Water solubility. Fed. Reg. 44: 16253-16259.			
pH	Not reported			

pH	Not reported
Results Details Method	HPLC
Standard Deviation Results	0.1
Results Details	ASTM Type 2 water

			EVALUATIO	N
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) and other physical/chemical properties.
Domain 2: Test Reliabil	lity			
	Metric 3:	Reliability/Unbiased	High	Standard test method used.
		(Method Objectivity)		
	Metric 4:	Reliability/Analytical Method	High	Protocol was designed to meet or exceed the requirements of the EPA-recommended procedure.
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

... continued from previous page

		continued from previous page	
Study Citation:	Howard, P. H., Banerjee, S., Robillard, K. commercial phthalate esters. Environmental		es octanol-water partition coefficients and vapor pressures of
OECD Harmonized	Water Solubility		
Template:			
HERO ID:	679985		
		EVALUATION	
Domain	Metric	Rating	Comments

Study Citation: Letinski, D. J., Jr, Connelly, M. J., Peterson, D. R., Parkerton, T. F. (2002). Slow-stir water solubility measurements of selected alcohols and diesters.

Chemosphere 43(3):257-265.

OECD Harmonized

Domain 3: Other

Water Solubility

Metric 4:

Metric 5:

Metric 6:

Template:

		EXTRACTIO	ON .		
Parameter	Data				
Water Solubility	0.61 µg/L				
CASRN and Test Material	28553-12-0; DINP				
Confidentiality, Type, and Guideline	None; Experimental; Slow-stir water	r solubility method			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR				
Radiolabel, Source, State, and Purity	NR; Jayflex DINP from ExxonMobi	l Chemical Company;	NR; NR		
Temperature	22°C				
System	glass aspirator bottles, a stir bar was placed in each bottle				
pH	Not reported				
Results Details Method	gas chromatograph equipped with mass selective detector				
Standard Deviation Results	0.031				
Results Details	Not Reported				
		EVALUATIO	N .		
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.		

Overall Quality Determination	High
Overain Quanty Determination	111511

Databases

Models

Reliability/Analytical Method

High

N/A

N/A

Data are obtained by accepted standard analytical methods.

Rating of this factor is not applicable to this kind of information.

Rating of this factor is not applicable to this kind of information.

Study Citation: Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology

83(2):168-173. Water Solubility

OECD Harmonized

Template:

HERO ID: 807140

EX	FR A	C	ΓI	O	N

Parameter	Data
Water Solubility	3.45X10-4 mg/L
CASRN and Test Material	28553-12-0; diisononyl phthalate
Confidentiality, Type, and Guideline	none; QSAR; Quantitative Structure-Property relationship model for estimation of water solubility
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR Notes: DINP
Temperature	not applicable
System	QSPR model using the Lu index, which is based on the shortest distance matrix.
pH	not applicable
Results Details Method	Predictive model developed using Lu index: Log Sw = 8.2431 - 0.5718 (Lu)
Standard Deviation Results	Not Reported
Results Details	n = 34; correlation coefficient (R) = 0.9869; standard error (SE) = 0.44; leave-one-out cross validation correlation coefficient (Rsv) = 0.9709; corresponding standarderrors (scv) = 0.47

			EVALUATION		
Domain		Metric		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 Reliab	oility				
	Metric 3:	Reliability/Unbiased	N/A	Rating of this factor is not applicable to this kind of information.	
		(Method Objectivity)			
	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	N/A	Rating of this factor is not applicable to this kind of information.	
	Metric 6:	Models	Uninformative	The QSPR model failed the standard error threshold of < 0.3 and is therefore rated unac ceptable.	

Overall Quality Determination Medium

toxicological effects. GRA and I(GRA and I):284.

OECD Harmonized

Water Solubility

Template:

HERO ID: 680058

		EXTRACTIO	N
Parameter	Data		
Water Solubility	0.18 mg/L		
CASRN and Test Material	28553-12-0 and 68515-48-0; diisononyl	phthalate	
Confidentiality, Type, and Guideline	no; not specified; Not Reported	r	
Solvent, Reactivity, Storage, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, and Purity	NR; NR; liquid; NR Notes: DINP		
Temperature	Not Reported		
System	not reported		
рН	not reported		
Results Details Method	Not Reported		
Standard Deviation Results	±0.10 mg/L		
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	Low	The analytical method is unknown and there is no indication that a reliable method was used.
Domain 3: Other			
Metric 5:	Databases	Low	The data are from a primary source without expert peer-review or an unknown secondary source without peer-review and references to the original sources.
Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

^{*} Related References: Referenced SRC 1982 (in CMA 1983e)

Study Citation: OECD Harmonized	NLM, (2015). PubChem: Hazardous Substance Data Bank: Di-isononyl phthalate, 28553-12-0. Water Solubility					
Template:						
HERO ID:	5926163					
			EXTRACTIO	N		
Parameter		Data				
Water Solubility		0.2 mg/L				
CASRN and Test Material		28553-12-0; Diisononyl phthalate				
Confidentiality, Type, and	Guideline	None; Experimental; Not reported				
Solvent, Reactivity, Storag		NR; NR; NR; NR				
Radiolabel, Source, State,	-	Not Reported; NR; Liquid; NR				
Temperature	•	20°C				
System		Not Reported				
рH		Not reported				
Results Details Method		Not Reported				
Standard Deviation Results	S	Not Reported				
Results Details		Not Reported				
			EVALUATIO	N		
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 Reliabil	•					
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
		(Method Objectivity)		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 publicly available database that provides references to original sources.		
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.		
Overall Quali	ty Dotormi	ingtion	Цigh			
Overall Quali	ty Determin	เมลนบม	High			

^{*} Related References: Howard, P.H. et al. 1985. Environ Toxicol Chem 4: 653-61

Study Citation:						
OECD Harmonized	Water Solubility					
Template:						
HERO ID:	679849					
		EXTRACTION				
Parameter		Data				
Water Solubility		< 0.001 - mg/L				
CASRN and Test Material						
		68515-48-0 and 28553-12-0; Di-isononyl phthalate				
Confidentiality, Type, and Guideline		No; not specified; NR				
Solvent, Reactivity, Storage, and Stability		NR; NR; NR				
Radiolabel, Source, State, and Purity		NR; NR; NR Notes: NR				
Temperature		NR				

NR

NR

NR

NR

Reported as insoluble.

System

Results Details Method

Results Details

Standard Deviation Results

Overall Quality Determination

pН

			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.
Domain 2: Test Reliab	ility			
	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	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.

^{*} Related References: Citing Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID 675437.

Study	Citation:	NTP-CERHR, (2003)). NTP-CERHR mon	ograph on the poter	ential human reproductiv	e and developmental eff	ects of di-isononyl phthalate	(DINP), Center

for the Evaluation of Risks to Human ReproductionVol(2):i-III90. Water Solubility

OECD Harmonized

Template:

		EXTRACTIO	N
Parameter	Data	EATRACTIO	
Water Solubility	< 0.001 mg/L		
CASRN and Test Material	68515-48-0 and 28553-12-0; Di-isonony	yl Phthalate	
Confidentiality, Type, and Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storage, and Stabili	ty Not Reported; Not Reported; Not Repor	rted; Not Reported	
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Repor	ted; 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		
		EVALUATIO	N.
Domain	Metric	Rating	Comments
Domain 1: Substance			
Metric 1:	Representativeness	High	Data are measured or estimated for the subject chemical substance.
Metric 2:	1	High	Measured data are consistent with the subject chemical substance structural features
		C	(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	Medium	There is no indication that the methodology for producing the information was biased
	(Method Objectivity)		towards a particular product or outcome.
Metric 4:		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
1720110 01		6	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.

... continued from previous page

Study Citation:	NTP-CERHR, (2003). NTP-CERHR monograph on the potential human reproductive and developmental effects of di-isononyl phthalate (DINP). Center
	for the Evaluation of Risks to Human ReproductionVol(2):i-III90.
OECD Harmonized	Water Solubility
Template:	
HERO ID:	680097

		EVALUATION	
Domain	Metric	Rating	Comments
Overall Quality Determination		High	

^{*} Related References: Staples CA, Peterson DR, Parkerton TF, Adams WJ. The environmental fate of phthalate esters: A literature review. Chemosphere 35:667-749(1997). HERO ID: 675437

Study Citation:	
OECD Harmonized	

SRC, (1983). Measurement of the water solubilities of phthalate esters (final report). Water Solubility

Template:

HERO ID: 1316216

EXT	$\Gamma \mathbf{R} A$	CT	'nΓ	N

Parameter	Data
Water Solubility	0.2 - mg/L
CASRN and Test Material	Not Reported; diisononyl phthalate
Confidentiality, Type, and Guideline	No; experimental; Measured test compound solubility in water by HPLC
Solvent, Reactivity, Storage, and Stability	Not Reported; Not Reported; Not Reported; Not Reported
Radiolabel, Source, State, and Purity	Not Reported; Not Reported; Not Reported
Temperature	25°C
System	Samples shaken in distilled water, centrifuged and then analyzed
pH	Not Reported
Results Details Method	HPLC
Standard Deviation Results	± 0.01
Results Details	The study reports that the experimental uncertainty exceeded that targeted in the SOP. Value reported based on curvilinear equation. Previously reported value = 0.24 ± 0.05 , value obtained by auditor = 0.24 ± 0.05 (linear equation).

			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 Reliabil	ity			
	Metric 3:	Reliability/Unbiased	Low	The study authors state that the experimental uncertainty exceeded that targeted in the
		(Method Objectivity)		SOP.
	Metric 4:	Reliability/Analytical Method	Low	Value was at the detection limit of the instrumentation. 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

Study Citation:	ECHA, (2013). 1907/2006.	Evaluation of new scientific evidence c	concerning DINP and D	IDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No
OECD Harmonized	Flash Point			
Template:				
HERO ID:	2441673			
			EXTRACTION	
Parameter		Data		
Flash Point		> 200 - C		
CASRN and Test Material		28553-12-0 and 68515-48-0; DINP		
Confidentiality, Type, and C	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storage		NR; NR; NR		
Radiolabel, Source, State, a	•	NR; NR; NR		
System	and I unity	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 Reliabil	ity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
	Metric 4:	(Method Objectivity) Reliability/Analytical Method	Medium	towards a particular product or outcome.
	Metric 4:	Renability/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				
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 Qualit	ty Determi	nation	Medium	

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation:	ECHA, (2016). Committee for Risk Assessment RAC - Annex 1 - Background document to the Opinion proposing harmonised classification and labelling at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1] 249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].				
OECD Harmonized	Flash Point	5715 Trumber: 00515 10 0 [1] 20555 12 0	, [≏].		
Template:					
HERO ID:	7325002				
			EXTRACTIO	N	
Parameter		Data			
Flash Point		236 - °C			
CASRN and Test Material		28533-12-0; Diisononyl phthalate			
Confidentiality, Type, and C	Guideline	None; experimental; ASTM D 93/EU M	ethod A.9		
Solvent, Reactivity, Storage	e, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported		
Radiolabel, Source, State, a	and Purity	Not Reported; Not Reported; Not Report			
System		Not Reported	_		
Standard Deviation Results		Not Reported			
Results Details		Not Reported			
			EVALUATIO	N	
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 Reliabili	ity				
	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	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.	

^{*} Related References: Referenced to the REACH registration (no HERO ID).

Study Citation: OECD Harmonized	NCBI, (2020). Flash Point	PubChem database: compound summary	: diisononyl phth	alate.
Template:	6620061			
HERO ID:	6629861			
			EXTRACTIO	N
Parameter		Data		
Flash Point		221 c		
CASRN and Test Material		28553-12-0; 0		
Confidentiality, Type, and	Guideline	None; Experimental; Closed cup		
Solvent, Reactivity, Storage		Not Reported; Not Reported; Not Report	ted; Not Reported	
Radiolabel, Source, State,	-	Not Reported; Not Reported; Not Report	_	
System	•	Not Reported		
Standard Deviation Results	s	Not Reported		
Results Details		Not Reported		
			EVALUATIO	N
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 Reliabil	lity			
	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	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				
2011411 3. 04101	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 Qualit	ty Determi	ination	High	

^{*} Related References: ILO International Chemical Safety Cards (ICSC) and Fire Protection Guide to Hazardous Materials. 13 ed. Quincy, MA: National Fire Protection Association, 2002., p. 325-99

Study Citation: OECD Harmonized	O'Neil, M. J. (2 Flash Point	2013). Diisononyl phthalate. :517.		
Template: HERO ID:	5348358			
			EXTRACTIO	N
Parameter		Data		
Flash Point		213 C		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Closed cup		
Solvent, Reactivity, Storag		NR; NR; NR		
Radiolabel, Source, State,		Not Reported; NR; Liquid; NR		
System		Not Reported		
Standard Deviation Result	S	Not reported		
Results Details		213°C (415°F)		
			EVALUATIO	N .
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 Reliabi	lity			
	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.

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation:	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No 1907/2006.			
OECD Harmonized	Autoflammabili	ity		
Template:				
HERO ID:	2441673			
			EXTRACTION	
Parameter		Data		
Auto-flammability		ca 380 C		
CASRN and Test Material		28553-12-0 and 68515-48-0; DINP		
Confidentiality, Type, and	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR		
System		Not Reported		
Standard Deviation Results	s	Not Reported		
Results Details		Not Reported		
Results Value		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 Reliabil	lity			
	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	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 Quali	ty Determi	nation	Medium	

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation: OECD Harmonized	at EU level of 1,2-Benzenedicarboxylic acid, di-C8-10-branched alkylesters, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-249-079-5 [2] CAS Number: 68515-48-0 [1] 28553-12-0 [2].				
Template: HERO ID:	7325002				
ILIKO ID.	7323002		EXTRACTIO	NI	
Parameter		Data	EXTRACTIO		
Auto-flammability		400 °C			
CASRN and Test Material		68515-48-0; Diisononyl phthalate			
Confidentiality, Type, and C	Guideline	No; experimental; ASTM E 659			
Solvent, Reactivity, Storage	, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported		
Radiolabel, Source, State, a	nd Purity	Not Reported; Not Reported; Not Report	ted; Not Reported		
System		Not Reported			
Standard Deviation Results		Not Reported			
Results Details		at 1313 hPa			
Results Value		Not Reported			
			EVALUATIO	N	
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 Reliabili	ity				
	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	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 Qualit	v Determi	nation	High		

 $^{^{\}star}$ Related References: Referenced to the REACH registration (no HERO ID).

Study Citation: OECD Harmonized	NCBI, (2020). Autoflammabili	PubChem database: compound summary: ity	diisononyl phthalate.	
Template: HERO ID:	6629861			
			EXTRACTION	
Parameter		Data		
Auto-flammability		380 C		
CASRN and Test Material		28553-12-0; DINP		
Confidentiality, Type, and C		None; Experimental; Not reported		
Solvent, Reactivity, Storage		NR; NR; NR; NR		
Radiolabel, Source, State, a	nd Purity	NR; NR; NR; NR		
System		Not reported		
Standard Deviation Results		Not reported		
Results Details		Not Reported		
Results Value		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 Reliabili	ity			
	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 Qualit	y Dotormi	nation	Medium	

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

Study Citation:	ECHA, (2013). Evaluation of new scientific evidence concerning DINP and DIDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No				
OECD Harmonized	1907/2006. Viscosity				
Template:	. 1000011				
HERO ID:	2441673				
			EXTRACTION		
Parameter		Data	EXTRACTION		
Viscosity		77.6			
CASRN and Test Material	[28553-12-0; DINP			
Confidentiality, Type, and	Guideline	no; not specified; Not Reported			
Solvent, Reactivity, Storag	ge, and Stability	NR; NR; NR			
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR			
Temperature		20°C			
Test Conditions		Not Reported			
Standard Deviation Result	S	Not Reported			
Results Details		value also reported: 27.7 mm2/s at 40°C			
Domain		Metric	EVALUATION Pating	Comments	
Domain 1: Substance		Wettic	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.	
	Wictire 2.	прогласнезз	17/11	Raung of this factor is not applicable to this kind of information.	
Domain 2: Test Reliabi	lity				
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased	
		(Method Objectivity)		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.	
Damain 2. Other					
Domain 3: Other	Metric 5:	Databases	Medium	The data are from a source that is known but is missing alaments required for High	
	wienic 3:	Databases	Mediuin	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.	
0 "0 "	. 50 :		3.6 34		
Overall Quali	ty Determi	ination	Medium		

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation:		. Evaluation of new scientific evidence co	oncerning DINP and D	IDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No
OECD Harmonized	1907/2006. Viscosity			
Template:				
HERO ID:	2441673			
			EXTRACTION	
Parameter		Data		
Viscosity		93		
CASRN and Test Material		68515-12-0; DINP		
Confidentiality, Type, and	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR		
Temperature		20°C		
Test Conditions		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 Reliabil	lity			
	Metric 3:	Reliability/Unbiased (Method Objectivity)	Medium	There is no indication that the methodology for producing the information was biase 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				
Domain J. Oulei	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.

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation:	at EU level of 1 249-079-5 [2] (ranched alkylest	round document to the Opinion proposing harmonised classification and labelling ers, C9- rich; [1] di-"isononyl" phthalate; [2] [DINP] EC Number: 271-090-9 [1]		
OECD Harmonized	Viscosity					
Template: HERO ID:	7325002					
HERO ID.	7323002					
Parameter		Data	EXTRACTIO	N		
1 at afficter		Data				
Viscosity		77.6				
CASRN and Test Material	1	28533-12-0; Diisononyl phthalate				
Confidentiality, Type, and	Guideline	No; experimental; OECD TG 114				
Solvent, Reactivity, Storag	ge, and Stability	Not Reported; Not Reported; Not Report	ted; Not Reported			
Radiolabel, Source, State,	and Purity	Not Reported; Not Reported; Not Report	ted; Not Reported			
Temperature		20 °C				
Test Conditions		Not Reported				
Standard Deviation Result	ts	Not Reported				
Results Details		77.6 mm ² /s at 20 °C and 27.7 mm ² /s at 40 °C				
			EVALUATIO	N		
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 Reliabi	ility					
2. 10 00 11011401	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased		
		(Method Objectivity)		towards a particular product or outcome.		
	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.		
Di 2- Oth						
Domain 3: Other	Matria F.	Detalesses	TT: _1			
	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.		

 $^{^{\}star}$ Related References: Referenced to the REACH registration (no HERO ID).

Study Citation: OECD Harmonized	HSDB, (2015) Viscosity	. Diisononyl phthalate (CASRN: 28553-12	-0).	
Template: HERO ID:	2356022			
TIEKO ID.	2330022		EXTRACTION	
Parameter		Data	EXTRACTION	
		Data		
Viscosity		6 - 500		
CASRN and Test Material		28553-12-0 and 68515-48-0; Di-isononyl	phthalate	
Confidentiality, Type, and	Guideline	no; not specified; NR	•	
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State, a	and Purity	NR; NR; NR; NR Notes: NR		
Temperature		0 to-100 °C		
Test Conditions		500 cST at 0 °C; 102 cST at 20 °C; 37 cS	t at 37.8 °C; 6 cSt at 10	0 °C
Standard Deviation Results	3	NR		
Results Details		NR		
			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 Reliabil	ity			
	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				
Zomani 3. Outei	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 Qualit	ty Determ	ination	Medium	

^{*} Related References: Citing O'Neil, M.J. (ed.). The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry, 2013., p. 598. HERO ID 5348358.

Study Citation:	Lorenzi, De, L., Fermeglia, M., Torriano, G. (1998). Density, kinematic viscosity, and refractive index for bis(2-ethylhexyl) adipate, tris(2-ethylhexyl)
	trimellitate, and diisononyl phthalate. Journal of Chemical and Engineering Data 43(2):183-186.

OECD Harmonized Viscosity

Template:

HERO ID: 1325695

EXTRACTION				
Parameter	Data			
Viscosity	55.334			
CASRN and Test Material	28553-12-0; Diisononyl phthalate			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	NR; NR; NR			
Radiolabel, Source, State, and Purity	NR; Aldrich; NR; 99+% mixture of C9 isomers, 0.15% maximum impurity (dioctyl phthalate) Notes: No further purification.			
Temperature	298.15 K			
Test Conditions	Viscosity measurements taken with an Ubbelohde suspended-level capillary viscometer coupled with a Schott electronic timer (AVS 300). The precision was ± 0.01 s. Temperature was regulated between ± 0.02 K and measured with an accuracy of ± 0.01 K.			
Standard Deviation Results	Not Reported			
Results Details	Value reported as 55.334 mPa.s. Experimental viscosity data (mPa.s): 101.95 at 291.29 K, 55.334 at 298.15 K, 32.812 at 308.17 K, 21.035 at 319.06 K, 13.812 at 327.98 K, 9.9061 at 337.87 K, 7.3961 at 348.72 K, 5.7089 at 358.64 K, and 4.5214 at 368.49 K.			

		EVALUATIO	V
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	Medium	The analytical method is non-standard but is expected to be appropriate.
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 Determ	vination	High	

Study Citation: OECD Harmonized	NCBI, (2020). Viscosity	PubChem database: compound summary:	diisononyl phth	alate.			
Template: HERO ID:	6629861						
			EXTRACTIO	N			
Parameter		Data					
Viscosity		77.6					
CASRN and Test Material		28553-12-0; Diisononyl phthalate					
Confidentiality, Type, and	Guideline	None; Experimental; Not reported					
Solvent, Reactivity, Storag		NR; NR; NR; NR					
Radiolabel, Source, State,	and Purity	NR; Aldrich; NR; 99% mixture of C9 iso	omers, 0.15% maxi	imum impurity (dioctyl phthalate) Notes: No further purification.			
Temperature		20°C					
Test Conditions		Not Reported					
Standard Deviation Result	S	Not Reported					
Results Details		Not Reported					
			EVALUATIO	N			
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 Reliabi	lity						
	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							
Domain J. Ould	Metric 5:	Databases	High	Data is from a publicly available, peer-reviewed database that provides references to a recognized data collection.			
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.			

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

Study Citation:	NLM, (2015). P	PubChem: Hazardous Substance Data Ba	nk: Di-isononyl j	phthalate, 28553-12-0.
OECD Harmonized	Viscosity			
Template:				
HERO ID:	5926163			
			EXTRACTIO	N
Parameter		Data		
Viscosity		102		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and G	uideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage,		NR; NR; NR		
Radiolabel, Source, State, ar	-	Not Reported; NR; Liquid; NR		
Temperature	•	20°C		
Test Conditions		Not Reported		
Standard Deviation Results		Not Reported		
Results Details		102 cST; kinematic viscosity		
.			EVALUATIO	
Domain		Metric	Rating	Comments
Domain 1: Substance	M 1	D	TT' 1	
	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 Reliabilit	ty			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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 publicly available, peer-reviewed database that provides references to a recognized data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.

^{*} Related References: O'Neil, M.J. (Ed.) 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. P. 598

Study Citation: Liu, L., Shen, L., Yang, F., Han, F., Hu, P., Song, M. (2016). Determining Phthalic Acid Esters Using Terahertz Time Domain Spectroscopy.	Journal of
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Applied Spectroscopy 83(4):603-609. Refractive Index

OECD Harmonized

Template:

HERO ID: 3540862

EXTRACTION				
Parameter	Data			
Refractive Index	1.524			
CASRN and Test Material	28553-12-0; Di-isononyl phthalate			
Confidentiality, Type, and Guideline	None; Experimental; Not reported			
Solvent, Reactivity, Storage, and Stability	99.99% pure alcohol; NR; Room temperature; NR			
Radiolabel, Source, State, and Purity	NR; Dr. Ehrenstorfer GmbH; Liquid; 99.0%			
Temperature	24°C			
System	A split Ti:sapphire mode-lock laser pulse was used to trigger THz pulses that were collected and collimated using a pair of gold coated off-axis parabolic mirrors and transmitted through the sample to be investigated.			
Standard Deviation Results	Not reported			
Results Details	The reference signal is a THz pulse transmitted through the empty crystal cell with a correction applied to account for the effect of the crystal cell absorbing THz waves. The experimental result is entered into a mathematical equation to calculate the refractive index.			
Results Details Methods	Not Reported			
Parameter	Not Reported			

			EVALUATIO	N
Domain		Metric	Rating	Comments
Domain 1: Substance				
	Metric 1:	Representativeness	High	Data was 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 Reliab	ility			
	Metric 3:	Reliability/Unbiased	High	Methodology clearly stated.
		(Method Objectivity)		•
	Metric 4:	Reliability/Analytical Method	High	Experimental procedures and analytical methods were clearly delineated.
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.

trimellitate, and diisononyl phthalate. Journal of Chemical and Engineering Data 43(2):183-186.

OECD Harmonized Template:

Refractive Index

HERO ID: 1325695

EXTRACTION			
Parameter	Data		
Refractive Index	1.48610		
CASRN and Test Material	28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage, and Stability	NR; NR; NR		
Radiolabel, Source, State, and Purity	NR; Aldrich; NR; 99+% mixture of C9 isomers, 0.15% maximum impurity (dioctyl phthalate) Notes: No further purification.		
Temperature	293.15 K		
System	Abbe ATAGO type 3 refractometer was used to measure the refractive index of the sodium-D line between 288.15 and 323.15 K. Temperature was regulated in a constant-temperature bath \pm 0.01 K.		
Standard Deviation Results	Not Reported		
Results Details	Value interpolated at 293.15 K. Experimental refractive index data: 1.4883 at 288.15 K, 1.4860 at 294.35 K, 1.4846 at 298.15 K, 1.4828 at 302.75 K, 1.4809 at 307.95 K, 1.4788 at 313.35 K, 1.4769 at 318.15 K, and 1.4753 at 322.25 K.		
Results Details Methods	Not Reported		
Parameter	Not Reported		

			EVALUATIO	N
Domain		Metric	Rating	Comments
Domain 1: Substance	ain 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 Reliab	ility			
	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	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	n High
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Study Citation: OECD Harmonized Template:	Harmonized Refractive Index			ohthalate, 28553-12-0.
HERO ID:	5926163			
			EXTRACTIO	N
Parameter		Data		
Refractive Index		1.486		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	Not Reported; NR; Liquid; NR		
Temperature		20°C		
System		Not Reported		
Standard Deviation Results	S	Not Reported		
Results Details		Not Reported		
Results Details Methods		Not Reported		
Parameter		Not Reported		
			EVALUATIO	N
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 Reliabil	lity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased towards a particular product or outcome.
	Metric 4:	(Method Objectivity) 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 publicly available, peer-reviewed database that provides references to a recognized data collection.
	Metric 6:	Models	N/A	Rating of this factor is not applicable to this kind of information.
Overall Quali	ty Determi	nation	High	

^{*} Related References: O'Neil, M.J. (Ed.) 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. P. 598

Study Citation: OECD Harmonized	O'Neil, M. J. (2 Refractive Inde	2013). Diisononyl phthalate. :517.		
Template: HERO ID:	5348358			
			EXTRACTIO	N
Parameter		Data		
Refractive Index		1.486		
CASRN and Test Material		28553-12-0; Diisononyl phthalate		
Confidentiality, Type, and C	Guideline	None; Experimental; Not reported		
Solvent, Reactivity, Storage		NR; NR; NR		
Radiolabel, Source, State, a		Not Reported; NR; Liquid; NR		
Temperature	,	20°C		
System		Not Reported		
Standard Deviation Results		Not Reported		
Results Details		Not Reported		
Results Details Methods		Not Reported		
Parameter		Not Reported		
			EVALUATIO	N
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 Reliabili	itv			
	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				
201111111111111111111111111111111111111	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 Qualit	v Determi	nation	High	

^{*} Related References: O'Neil, M.J. (Ed.). 2013. The Merck Index - An Encyclopedia of Chemicals, Drugs, and Biologicals. Cambridge, UK: Royal Society of Chemistry. p. 598-599.

Study Citation:	Cousins, A. P., Remberger, M., Kaj, L., Ekheden, Y., Dusan, B., Brorstroem-Lunden, E. (2007). Results from the Swedish National Screening Programme				
OECD Harmonized	2006. Subrepor Henry's Law	rt 1: Phthalates. GRA and I(GRA and I):39).		
Template:	Ticiny s Law				
HERO ID:	675060				
			EXTRACTION		
Parameter		Data			
Henry's Law		9.26 Pa x m^3/mol			
CASRN and Test Material		28553-12-0 and 68515-48-0; di-isononyl p	phthalate		
Confidentiality, Type, and	Guideline	none; not specified; Not Reported	<u>.</u>		
Solvent, Reactivity, Storag		NR; NR; NR			
Radiolabel, Source, State,		None; NR; NR; NR			
Temperature	•	Not Reported			
pН		Not Reported			
System		Not Reported			
Standard Deviation Results	s	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 Reliabil	lity				
	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	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 Quali	tv Determi	ination	Medium		

^{*} Related References: Cousins, I. T., Mackay, D., Parkerton, T. F.. Physical-chemical properties and evaluative fate modelling of phthalate esters. The Handbook of Environmental Chemistry, vol 3Q. 2003. 3:57-84.

Study Chatton: Cousins, 1., Mackay, D. (2000). Correlating the physical-chemical properties of philadate esters using the time solubility approach. Chemosp	Study Citation:	Cousins, I., Mackay, D. (2000)	Correlating the physical-chemical properties of phthalat	e esters using the 'three solubility' approach. Chemosphere
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41(9):1389-1399.

OECD Harmonized

Henry's Law

Template:

HERO ID: 4159647

Parameter	Data				
II	9.26 Pa m3/mol				
Henry's Law CASRN and Test Material					
	28553-12-0; Diisononyl phthalate				
Confidentiality, Type, and Guideline	None; QSAR; Not Reported				
Solvent, Reactivity, Storage, and Stability	NR; NR; NR				
Radiolabel, Source, State, and Purity		NR; NR; NR Notes: DINP			
Temperature		25°C			
pH	Not reported				
System	Three solubility approach: a quantitative structure-property relationship; correlations between apparent-solubilities of liquid state compounds in				
Standard Deviation Results	air and water, and molecular structures used to estimate partition coefficient Kaw (air-water)				
Standard Deviation Results	Not reported				
Dagulta Dataila	log Kaw = -2.43				
	-				
	log Kaw = -2.43 Not applicable				
	-	EVALUATIO	on		
	-	EVALUATIO Rating	ON Comments		
Results Details Methods Domain	Not applicable				
Results Details Methods Domain	Not applicable	Rating			
Domain 1: Substance	Not applicable Metric		Comments		
Domain Domain 1: Substance Metric 1: Metric 2:	Not applicable Metric Representativeness	Rating High	Comments Data are estimated for the subject chemical substance.		
Domain Domain 1: Substance Metric 1: Metric 2:	Not applicable Metric Representativeness Appropriateness	Rating High N/A	Comments Data are estimated for the subject chemical substance. Rating of this factor is not applicable to this kind of information.		
Domain Domain 1: Substance Metric 1: Metric 2: Domain 2: Test Reliability	Not applicable Metric Representativeness	Rating High	Comments Data are estimated for the subject chemical substance.		

Overall Quality Determination

Databases

Models

Metric 5:

Metric 6:

High

N/A

High

Rating of this factor is not applicable to this kind of information.

known and r2 > 0.7, q2 > 0.5, and SE < 0.3.

The model had a defined, unambiguous endpoint AND the model performance was

Study Citation:		Evaluation of new scientific evidence c	oncerning DINP and D	IDP in relation to entry 52 of Annex XVII to REACH Regulation (EC) No
OECD Harmonized	1907/2006. Henry's Law			
Template:				
HERO ID:	2441673			
			EXTRACTION	
Parameter		Data	EATRACTION	
Henry's Law		41.4 Pa.m3/mol		
CASRN and Test Material		28553-12-0 and 68515-48-0; DINP		
Confidentiality, Type, and	Guideline	no; not specified; Not Reported		
Solvent, Reactivity, Storag	e, and Stability	NR; NR; NR; NR		
Radiolabel, Source, State,	and Purity	NR; NR; NR; NR		
Temperature		Not Reported		
pН		Not Reported		
System		Not Reported		
Standard Deviation Results	S	Not Reported		
Results Details		Not Reported		
Results Details Methods		Not Reported		
			EVALUATION	
Domain		Metric	EVALUATION Rating	Comments
Domain 1: Substance		Wietric	Kattiig	Confinence
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.
	Metric 2.	Appropriateness	Tilgii	Weasured data are consistent with the subject chemical substance structural readires.
Domain 2: Test Reliabil	lity			
	Metric 3:	Reliability/Unbiased	Medium	There is no indication that the methodology for producing the information was biased
		(Method Objectivity)		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	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.
0 11 0 11	. = .		3.5.31	
Overall Quali	ty Determi	nation	Medium	

^{*} Related References: EC (2003a). Risk Assessment Report for DINP. Final report, European Commission, EUR 20784EN, European Union Risk Assessment Report, Volume 35, Luxembourg: Office for Official Publications of the European Communities.

Study Citation:	Lu, C. (2009). Prediction of env	rironmental properties in water	-soil-air systems for phthalates.	s. Bulletin of Environmental Contamination and Toxicolog	y
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83(2):168-173. Henry's Law

OECD Harmonized

Template:

HERO ID: 807140

EXTR	ACT	ION

Parameter	Data
Henry's Law	Not Reported
CASRN and Test Material	28553-12-0; diisononyl phthalate
Confidentiality, Type, and Guideline	none; QSAR; Quantitative Structure-Property relationship model for estimation of log Kaw
Solvent, Reactivity, Storage, and Stability	NR; NR; NR
Radiolabel, Source, State, and Purity	NR; NR; NR Notes: DINP
Temperature	Not Reported
pH	Not Reported
System	Kaw = S(A)/Sw where $S(A)$ is the solubility in air and Sw is the solubility in water
Standard Deviation Results	Not Reported
Results Details	Log Kaw= -2.20
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	N/A	Rating of this factor is not applicable to this kind of information.
Domain 2: Test Reliab	oility			
	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	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	Medium	Modeled data compared well to other data.

Overall Quality Determination

Medium

Study Citation:	Lu, C. (2009). Prediction of environmental properties in water-soil-air systems for phthalates. Bulletin of Environmental Contamination and Toxicology
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83(2):168-173.

OECD Harmonized Template:

Other Properties

HERO ID: 807140

EXTRACTION

Parameter Data

CASRN and Test Material 28553-12-0; diisononyl phthalate

Confidentiality, Type, and Guideline none; QSAR; Quantitative Structure-Property relationship model for estimation of log Koa

Solvent, Reactivity, Storage, and Stability NR; NR; NR; NR

Radiolabel, Source, State, and Purity NR; NR; NR; NR Notes: DINP

Results Value Log Koa = 10.72

Results Details Koa = So/S(A) where So is solubility in octanol and S(A) is the solubility in air

Results Remarks Not Reported

			EVALUATION	
Domain		Metric	Rating	Comments
Domain 1: Substance	ce			
	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 Rel	liability			
	Metric 3:	Reliability/Unbiased	N/A	Rating of this factor is not applicable to this kind of information.
		(Method Objectivity)		
	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	N/A	Rating of this factor is not applicable to this kind of information.
	Metric 6:	Models	Medium	Modeled data compared well to other data.

Overall Quality Determination Medium

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
С	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
Koa	Octanol-Air partition coefficient
Kow	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)
pН	Negative base 10 Log of Hydrogen Ion (H+) Concentration in Aque-
	ous Solution
pKa	Negative base 10 Log of Acid Dissociation Constant (Ka)
RIVM	National Institute for Public Health and the Environment (Dutch: Ri-
	jksinstituut 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