United States
Environmental Protection Agency

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Office of Chemical Safety and
Pollution Prevention

Draft Use Report for Di-isodecyl Phthalate (DIDP)
(1,2-Benzenedicarboxylic acid, 1,2-diisodecyl ester and 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich)

(CASRN 26761-40-0 and 68515-49-1)

November 2020

Acknowledgment and Disclaimer

EPA acknowledges the analytical and draft preparation support of Abt Associates Inc. of Cambridge, Massachusetts, provided under Contract No. EP-W-16-009 in the preparation of this report.

This document provides publicly available information as of the date of this document on the manufacturing (including importing), processing, distribution in commerce, use, and disposal of DIDP and is used to inform decisions regarding conditions of use. The document does not reflect information received directly from other sources such as manufacturers, processors, etc., which has further informed the conditions of use in the draft Scope Document. As such, the uses described in this document may differ from the conditions of use in the draft Scope Document.

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1 Introduction

On May 23rd, 2019 EPA received a manufacturer-requested risk evaluation for di-isodecyl phthalate (DIDP; CAS RN 26761-40-0 & 68515-49-1). This document provides publicly available information as of the date of this document on the manufacturing (including importing), processing, distribution in commerce, use, and disposal of DIDP and is used to inform decisions regarding conditions of use. The document does not reflect information received directly from other sources such as manufacturers, processors, etc., which has further informed the conditions of use in the draft Scope Document. As such, the uses described in this document may differ from the conditions of use in the draft Scope Document.

EPA consulted a variety of sources to identify uses of DIDP. This included EPA's review of published literature and online databases including the most recent data available from EPA's Chemical Data Reporting program (CDR) and Safety Data Sheets (SDSs). EPA also conducted online research by reviewing company websites of potential manufacturers, importers, distributors, retailers, or other users of DIDP and queried government and commercial trade databases. Sources included information reported to EPA (including National Emissions Inventory and the Toxics Release Inventory when appropriate), literature searches, proprietary reports, trade publications, and reports developed for prior EPA and international sources. To identify formulated products containing DIDP, EPA searched for (material) safety data sheets (M)SDS using internet searches, EPA Chemical and Product Categories (CPCat) data, the National Institute for Health's (NIH) Household Product Database, and other resources in which (M)SDS could be found. Each (M)SDS was then cross-checked with company websites to make sure that each product (M)SDS was current. EPA also makes use of communications with companies, industry groups, environmental organizations, and public comments to supplement the information when possible.

DIDP is a plasticizer used in PVC as well as consumer, commercial, and industrial adhesives, sealants, lubricants, greases, and paints and coatings (EPA 2017a; NLM 2019a). Table 1-1 includes basic information about DIDP.

Table 1-1: Chemical Name, Synonyms, and CASRN for DIDP

Chemical Name	Diisodecyl phthalate (DIDP)
CASRN	26761-40-0; 68515-49-1 (89-16-7)
Synonyms	1,2-Benzenedicarboxylic Acid 1,2-Bis(8-methylnonyl) Ester; 1,2-Benzenedicarboxylic acid di-c9-11-branched alkyl esters c10-rich; 1,2-Benzenedicarboxylic acid, 1,2-diisodecyl ester; 1,2-Benzenedicarboxylic acid, bis(8-methylnonyl) ester; 1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich; 1,2-Benzenedicarboxylic acid, diisodecyl ester; bis(8-methylnonyl) benzene-1,2-dicarboxylate; Bis(8-methylnonyl) phthalate; Bis(isodecyl) phthalate; Di(C9-C11) branched alkyl phthalate; Di(i-decyl) phthalate; di(isodecyl) phthalate; di-isodecyl phthalate; Phthalic Acid Diisodecyl Ester; Phthalic acid diisodesyl; Phthalic acid, bis(8-methylnonyl) ester; Phthalic acid, bis-8-methylnonyl ester; Phthalic acid, di-C9-11-branched alkyl esters, C10-rich; Phthalic acid, diisodecyl ester
Trade Name(s)	See Table 2-5 for a sample of product names.
Source(s): NLM (2019a)	

2 Uses and Production Volume

The primary data source used to assess use and production in this report is EPA's Chemical Reporting Database (CDR). Note that Appendix A presents a complete list of the sources searched and utilized for the composition of this report.

2.1 Domestic Manufacture and Import (CDR)

2.1.1 Chemical Data Reporting

The CDR rule under TSCA requires manufacturers (including importers) to provide information to EPA every four years on the chemicals they manufacture or import into the United States. Table 2-1 presents the various conditions under which a facility subject to TSCA must report to CDR. For chemicals such as di-isobutyl phthalate which are not subject to specific TSCA actions, a manufacturer is required to report any volume generally above 25,000 pounds, while small manufacturers are only required to report any volume generally above 100,000 pounds. Data collected for each chemical include the company name, volume of each chemical manufactured/imported, the number of workers at each site, and information on whether the chemical is used in the industrial, commercial, and/or consumer sector. Exemptions apply to small manufacturers. The definition of a small manufacturer varies depending on the sector in which it operates, but generally, CDR requires manufacturers (including importers) to report information on the chemicals they produce domestically or import into the U.S. generally above 25,000 lbs. per site per year.

Table 2-1: Conditions under Which a Company Must Report to CDR (shaded area applies to DIDP)

TSCA Action	Obligation to Report to CDR Information When Subject to TSCA Action as Indicated in Left column			
	Subject to 25,000 lb. reporting threshold	Subject to 2,500 lb. reporting threshold	Not eligible for certain full or partial exemptions from reporting	Not eligible for small manufacturer exemption
Not subject to TSCA action	✓			
TSCA section 4 rules (proposed or promulgated)	✓		✓	✓
Enforceable Consent Agreements (ECAs)	✓		✓	
TSCA section 5(a)(2) SNURs (proposed or promulgated)		✓	✓	
TSCA section 5(b)(4) rules (proposed or promulgated)		✓	✓	✓
TSCA section 5(e) orders		✓	✓	✓
TSCA section 5(f) orders		✓	✓	
TSCA section 5 civil actions		✓	✓	✓

TSCA Action	Obligation to Report to CDR Information When Subject to TSCA Action as Indicated in Left column			
	Subject to 25,000 lb. reporting threshold	**Subject to 2,500 lb. reporting threshold**	**Not eligible for certain full or partial exemptions from reporting**	**Not eligible for small manufacturer exemption**
TSCA section 6 rules (proposed or promulgated)		✓	✓	✓
TSCA section 7 civil actions		✓	✓	✓
The reporting thresholds provided in this table apply to the 2016 reporting cycle and are determined based on the chemical substance's status as of June 1, 2016.				

2.1.2 Manufacturers and Importers

According to the 2016 Chemical Data Reporting (CDR) database, thirteen companies manufactured or imported DIDP at thirteen sites for reporting year 2015. Table 2-2 presents the company information and manufacture and import information where available. Table 2-2 does not represent all of the facilities potentially manufacturing or using DIDP. CDR requires manufacturers (including importers) to report information on the chemicals they produce domestically or import into the U.S. generally above 25,000 lbs. per site per year. Individual production volumes were withheld, but may be available in later releases of the 2016 CDR.

Table 2-3 presents the historic production volume of DIDP from the CDR (previously known as the Inventory Update Rule, or IUR) from 1986-2015. In reporting years 1986 and 1998 aggregate production volume for DIDP was between 10 million and 500 million lbs., and in reporting years 1990 and 1994 aggregate production volume was between 50 million and 500 million lbs. In reporting years 2002 and 2006, aggregate production volume was 1 million to 500 million lbs. and between 2012 and 2015 aggregate production volume was between 1 million and 250 million lbs. In 2011, between 100 million and 250 million lbs. of DIDP was produced or imported.

Table 2-2: 2016 CDR U.S. Manufacturers and Importers of DIDP

CAS RN	U.S. Parent Company	Site	Site Address	Manufacture or Import	Manufactured Volume (lbs./yr.)	Imported Volume (lbs./yr.)	Past Production Volume (2014) (lbs./yr.)
26761-40-0	Alac International Inc.[1,2]	Alac International, Inc.	708 Third Avenue 5th Floor, New York, NY, 10017	Withheld	Withheld	Withheld	Withheld
26761-40-0	Chemtura Corporation	Chemtura Corp D/B/A Hatco Corp.	1020 King Georges Post Road, Fords, NJ, 08863-2329	Manufacture	Withheld	Withheld	Withheld
26761-40-0	Industrial Chemicals Inc.[1]	Industrial Chemicals Inc.	2042 Montreat Drive, Vestavia Hills, AL, 35216	Withheld	Withheld	Withheld	Withheld
26761-40-0	RPM International Inc.	Tremco Incorporated	3735 Green Road, Beachwood, OH, 44122	Import	Withheld	Withheld	Withheld
26761-40-0	Sherwin Williams Co.	Sherwin-Williams Company	101 Prospect Avenue Northwest, Cleveland, OH, 44115-1075	Import	Withheld	Withheld	Withheld
26761-40-0	Soyventis North America LLC[1,2]	Soyventis North America LLC	100 Town Square Pl, Jersey City, NJ, 07310	Withheld	Withheld	Withheld	Withheld
68515-49-1	3M Company	3M Company	3M Center, St Paul, MN, 55144-1000	Import	Withheld	Withheld	Withheld

CAS RN	U.S. Parent Company	Site	Site Address	Manufacture or Import	Manufactured Volume (lbs./yr.)	Imported Volume (lbs./yr.)	Past Production Volume (2014) (lbs./yr.)
68515-49-1	BASF Corporation[1]	BASF Imports Part 4	100 Park Ave, Florham Park, NJ, 07932	Import	Withheld	Withheld	Withheld
68515-49-1	CBI[1,2]	Exxon Mobil Br Chemical Plant	4999 Scenic Hwy., Baton Rouge, LA, 70805	CBI	Withheld	Withheld	Withheld
68515-49-1		Infineum USA L.P.	1900 E Linden Ave, Linden, NJ, 07036	Withheld	Withheld	Withheld	Withheld
68515-49-1	Hallstar Co.[1]	The Hallstar Company	120 S. Riverside Drive; Suite 1620, Chicago, IL, 60606	CBI	Withheld	Withheld	Withheld
68515-49-1	Sika Corporation	Sika Corp	201 Polito Ave., Lyndhurst, NJ, 07071	Import	Withheld	Withheld	Withheld
68515-49-1	Valtris Specialty Chemicals Inc.[1]	Akcros Chemicals	501 Jersey Ave, New Brunswick, NJ, 08901	Manufacture/ Import	Withheld	Withheld	Withheld

Source(s):
EPA (2017b)

1. This company reported consumer/commercial use in CDR, however this company did not submit information under Part 3B (Processing & Use Information).

2. This company reported industrial use in CDR, however this company did not submit information under Part 3B (Processing & Use Information).

2.1.3 National Production Volume

Table 2-3: 1986-2015 National Production Volume Data for DIDP (Non-Confidential Production Volume in Pounds)

CAS RN	1986	1990	1994	1998	2002	2006	2011	2012	2013	2014	2015
26761-40-0	>10 M – 50 M	>50 M – 100 M	>50 M – 100 M	>10 M – 50 M	>1 M – 10 M	1 M - <10 M	500 K – 1 M	1 – 10 M	1 – 10 M	1 – 10 M	1 – 10 M
68515-49-1	>100 M – 500 M	>100 M – 500 M	>100 M – 500 M	>100 M – 500 M	>100 M – 500 M	100 M - <500 M	162,796,827	100 – 250 M	100 – 250 M	100 – 250 M	100 – 250 M

K = Thousand; M = Million; NDR = No data reported

Source(s):
EPA (2018a; 2017b; 2006; 2002)

2.2 Toxics Release Inventory (TRI) Data

TRI is used by EPA to learn about toxic chemical releases above certain reporting thresholds (generally 10,000 pounds), and pollution prevention activities from industrial and federal facilities. Annual reporting is required by facilities that are in specific industry sectors, employ 10 or more full-time equivalent employees, and manufacture, process, or otherwise use a TRI-listed chemical in quantities above a threshold level in a given year (U.S. Environmental Protection Agency (EPA) 2018e).The approximately 600 chemicals listed by the TRI program cause cancer or other chronic human health effects, significant adverse acute human health effects, or significant adverse environmental effects. The TRI chemical list does not include all toxic chemicals used in the United States.

DIDP was not reported to the 2017 Toxics Release Inventory (TRI).

2.3 Resource Conservation and Recovery Act (RCRA) Data

The RCRA Biennial Report (BR) contains information on generation, transportation, treatment, storage, and disposal of hazardous waste.

DIDP was not reported to the 2017 RCRA Biennial Report.

2.4 National Emissions Inventory (NEI) Data

The National Emissions Inventory (NEI) is a comprehensive and detailed estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from air emissions sources. The NEI is released every three years based primarily upon data provided by State, Local, and Tribal air agencies for sources in their jurisdictions and supplemented by data developed by the US EPA (EPA 2014a).

DIDP was not reported to the 2014 NEI.

2.5 Summary of Uses

This section summarizes the uses of DIDP. See Table 2-4 and Table B-1 for a more comprehensive review of DIDP uses. See Appendix A for a description of sources used in this report in addition to CDR.

Uses are divided into Tier 1 and Tier 2 uses. Those in Tier 1 generally have more information to support the accuracy of the use. For instance, these uses may be identified from sources where manufacturers and producers self- report the information or have been confirmed by identification of the chemical on a product SDS. They are found in Table 2-4. Tier 2 uses are other uses that may be historic, non-TSCA use, or more anecdotal, and are found in the table in Appendix B.

The U.S. Patent and Trademark Office has an online database that shows 2,408 patents referencing “Diisodecyl phthalate” or “1,2-Benzenedicarboxylic acid, di-C9-11-branched alkyl esters, C10-rich” (USPTO 2019). Although patents could be useful in determining reasonably foreseeable uses, the information can be extremely technical, and it is difficult to confirm whether any of the patented technologies are currently in use. Therefore, uses inferred from patents containing DIDP were not included in Table 2-4.

2.6 Tier 1 uses of DIDP

DIDP is primarily used as a plasticizer in PVC for numerous consumer and industrial applications, such as dashboards, windows, molded interior applications, wires and cables, and synthetic lubricants and engine oils (American Chemistry Council 2018). As of 2013, the market for phthalates was shifting from linear phthalates to "softer" vinyl phthalates such as DIDP (Ullmann's 2013). As of 2007, DIDP was the preferred general purpose plasticizer for wires and cables (Ullmann's 2007). Table 2-5 lists numerous plasticizer products with DINP as the only or primary ingredient.

Table 2-4: Tier 1 Uses of DIDP

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Manufacturing			
Import		Industrial	EPA (2017b) The 2016 CDR reports import of DIDP.
Manufacture		Industrial	EPA (2017b) The 2016 CDR reports domestic manufacturing of DIDP.
Processing			
Incorporation into formulation, mixture, or reaction product	Adhesive manufacturing; adhesive and sealant chemicals	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); CPCat (2015) The 2016 and 2012 CDRs report use of DIDP as a plasticizer for processing (incorporation into formulation, mixture, or reaction product) in adhesive manufacturing. The 2016 and 2012 CDRs also report use of this chemical in industrial adhesive and sealant chemicals for processing (incorporation into formulation, mixture, or reaction product).
Incorporation into formulation, mixture, or reaction product; repackaging	All other basic organic chemical manufacturing	Industrial Expected users are based on CDR's Industrial use database.	EPA (2014); CPCat (2015); ECHA (2019); SPIN (2020) The 2012 CDR reports use of DIDP as a lubricant and lubricant additive for processing in all other basic organic chemical manufacturing. ECHA identifies use of DIDP in the manufacture of fine and bulk, large-scale chemicals in European countries. SPIN identifies use of this chemical in the manufacture of chemicals and chemical products in Nordic countries.

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Incorporation into formulation, mixture, or reaction product	Compounding of purchased resins	Industrial Expected users are based on CDR's Industrial use database.	EPA (2014); CPCat (2015) The 2012 CDR reports use of DIDP as a plasticizer for processing in custom compounding of purchased resins.
Incorporation into article	Electrical equipment, appliance, and component manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); SPIN (2020) The 2016 and 2012 CDRs report use of DIDP as a plasticizer for processing (incorporation into article) in electrical equipment, appliance, and component manufacturing. SPIN reports use of this chemical in the manufacture of electrical equipment, machinery; computer, electronic, and optical products; and radio, television and communication equipment in Nordic countries.
Incorporation into article	Miscellaneous manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); CPCat (2015); ECHA (2019) The 2016 and 2012 CDRs report use of DIDP as an adhesive and sealant chemical and plasticizer for processing (incorporation into article) in miscellaneous manufacturing. ECHA identifies use of this chemical in general manufacturing (*e.g.*, machinery, equipment) for car interiors and lubricants in European countries.
Incorporation into formulation, mixture, or reaction product	Oil and gas drilling, extraction, and support activities	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b) The 2016 CDR reports use of DIDP as a processing aid specific to petroleum production for processing (incorporation into formulation, mixture, or reaction product) in oil and gas drilling, extraction, and support activities.
Incorporation into formulation, mixture, or reaction product	Paint and coating manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); CPCat (2015); SPIN (2020) The 2016 and 2012 CDRs report use of DIDP as a plasticizer for processing (incorporation into formulation, mixture, or reaction product) in paint and coating manufacturing. SPIN reports use of this chemical in paint industry in Nordic countries.

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Incorporation into article, formulation, mixture, or reaction product	Petroleum lubricating oil and grease manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); CPCat (2015) The 2016 and 2012 CDRs report use of DIDP as a lubricant and lubricant additive for processing (incorporation into article, formulation, mixture, or reaction product) in petroleum lubricating oil and grease manufacturing.
Incorporation into article, formulation, mixture, or reaction product	Plastic material and resin manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); CPCat (2015); ECHA (2019); SPIN (2020) The 2016 CDR reports use of DIDP as an intermediate for processing (incorporation into formulation, mixture, or reaction product) in plastic material and resin manufacturing, and the 2012 CDR reports use of this chemical as a plasticizer in plastic material and resin manufacturing. ECHA reports use of DIDP in polymer preparations and compounds in European countries. SPIN identifies use of this chemical as in intermediate in plastics manufacture in Nordic countries.
Incorporation into article, formulation, mixture, or reaction product	Plastics product manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); CPCat (2015); ECHA (2019); SPIN (2020) The 2016 and 2012 CDRs report use of DIDP as a plasticizer for processing (incorporation into article, formulation, mixture, or reaction product) in plastics product manufacturing. ECHA identifies use of this chemical in the manufacture of plastic products, including compounding and conversion, for end-use in plastics and construction materials in European countries. SPIN reports use of this chemical in the manufacture of and industry for plastic products.
Incorporation into article	Rubber product manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); ECHA (2019); SPIN (2020) The 2016 CDR reports use of DIDP as a plasticizer for processing (incorporation into article) in rubber product manufacturing. ECHA identifies use of this chemical in the manufacture of rubber products (polymer processing) in European countries. SPIN reports use of this chemical in the manufacture of rubber and plastic products and industry for rubber products in Nordic countries.

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Incorporation into article	Textiles, apparel, and leather manufacturing	Industrial Expected users are based on CDR's Industrial use database.	EPA (2014); CPCat (2015) The 2012 CDR identifies use of DIDP as a plasticizer for processing in industrial textiles, apparel, and leather manufacturing.
Incorporation into article	Transportation equipment manufacturing	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); CPCat (2015) The 2016 and 2012 CDRs report use of DIDP as an adhesive and sealant chemical for processing (incorporation into article) in transportation equipment manufacturing.
Repackaging	Wholesale and retail trade	Industrial Expected users are based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014); SPIN (2020) The 2016 and 2012 CDRs report use of DIDP as a plasticizer for processing (repackaging) in wholesale and retail trade. SPIN reports use of this chemical in retail and wholesale trade in Nordic countries, including sale and repair of motor vehicles.
Commercial, Consumer and Industrial Uses			
Adhesive, colorant, filler, pigment, sealant	Adhesives and sealants	Consumer, Commercial, Industrial Expected users are consumer and commercial based on CDR's consumer/commercial classification and industrial based on CDR's Industrial Processing and Use report.	EPA (2017b); EPA (2014b); DeLima Associates (2019a); DeLima Associates (2019b); CPCat (2015); ECHA (2019); SPIN (2020) The 2016 CDR reports use of DIDP in consumer and commercial adhesives and sealants at concentrations of at least 30% but less than 60% by weight, and in commercial adhesives and sealants at concentrations of at least 1% but less than 30% by weight. The 2012 CDR also reports consumer and commercial use of DIDP in adhesives and sealants. CPID identifies consumer concrete, masonry, roof, flashing, kitchen, and bath sealant and adhesive caulk products that contain DIDP. ECHA and SPIN identify use of this chemical in adhesives, sealants, and binding materials in European and Nordic countries. Table 2-5 lists several adhesive and sealant products (including for construction and marine use), as well as multiple colorants and pigments for caulks and adhesives. Table 2-5 also lists multiple activators and curing products used in repair caulks and sealants.

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Casting resin (urethane)	Arts, crafts, and hobby materials	Consumer, Commercial Expected users are based on CDR's consumer/commercial classification.	Environmental Technology Inc. (2016); EPA (2014b); CPCat (2015) Environmental Technology Inc. identifies DIDP as an ingredient in a two-component urethane casting resin used in casting, prototyping, miniatures, models, and taxidermy. The 2012 CDR reports consumer and commercial use of DIDP in arts, crafts, and hobby materials.
Unknown	Automotive care products	Commercial	EPA (2014b); CPCat (2015) The 2012 CDR reports use of DIDP in commercial automotive care products. Expected users are commercial based on CDR's consumer/commercial classification.
Pigments, pigment thinners	Dyes and pigments	Unknown Expected users are unknown due to the limited availability of information.	BJB Enterprises Inc. (2019a); Evident Crime Scene Products (n.d.); European Chemicals Bureau (2003); SPIN (2020) BJB Enterprises identifies use of DIDP in pigments and pigment thinners. Evident Crime Scene Products identifies DIDP as an ingredient in a fluorescent dye stain product used in fingerprinting. The ECB identified use of DIDP in printing ink in European countries. SPIN reports use of this chemical in coloring agents, dyestuffs, pigments, and pigment pastes in Nordic countries.
Unknown	Electrical and electronic products	Consumer, Commercial Expected users are based on CDR's consumer/commercial classification.	EPA (2014b); CPCat (2015); Danish EPA (2003a); SPIN (2020) The 2012 CDR reports use of DIDP in consumer and commercial electrical and electronic products. A Danish EPA survey identified DIDP as a substance which may be emitted from electrical and electronic equipment. SPIN reports use of this chemical in electric current insulation materials in Nordic countries.
Unknown	Furniture and furnishings	Commercial Expected users are based on CDR's consumer/commercial classification.	EPA (2014b); CPCat (2015) The 2012 CDR reports use of DIDP in commercial furniture and furnishings not covered elsewhere.

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Cleaner, heat transfer fluid	Heat transfer systems	Commercial This use is identified under ECHA's uses by professional workers; therefore, the expected users are commercial.	Duratherm (2019a); Mokon (2018a); ECHA (2019) Duratherm and Mokon identify DIDP as an ingredient in cleaners (sludge and carbon removal) for heat transfer systems. Duratherm also identifies DIDP as an ingredient in heat transfer fluid products. ECHA identifies use of DIDP in commercial heat transfer fluids for general professional use in vehicles or machinery in European countries.
Laboratory use	Laboratory chemicals	Commercial, Industrial Expected users are not specified but are expected to be commercial or industrial.	SPEX CertiPrep LLC (2017b); Toronto Research Chemicals (2017); HB Chemical (2014c) SPEX CertiPrep LLC and Toronto Research Chemicals identify use of DIDP as a certified reference material and research chemical. HB Chemical identifies DIDP as a dispersion chemical.
Unknown	Lubricants and greases	Consumer, Commercial, Industrial Expected users are commercial based on CDR's consumer/commercial classification, consumer based on reporting under ECHA's consumer uses, and industrial based on product SDS information.	EPA (2017b); EPA (2014); CPCat (2015); ECHA (2019); SPIN (2020) The 2016 CDR reports use of DIDP in commercial lubricants and greases at concentrations of at least 90% by weight. The 2012 CDR also reports use of this chemical in consumer and commercial lubricants and greases. Table 2-5 lists several lubricant products, including industrial lubricating oils, compressor fluids for maintenance and repair, and transmission conditioner. ECHA identifies use of DIDP in consumer and commercial lubricants, greases, and release products in European countries. ECHA also identifies use of DIDP in commercial hydraulic fluids for end-use in lubricants, waxes, and greases as well as general professional use in vehicles or machinery in European countries. SPIN reports use of this chemical in lubricants, lubricating grease and oil, and additives.

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Casting resin (urethane), curing agent	Paints and coatings	Consumer, Commercial, Industrial, NKRA	EPA (2017b); EPA (2014); Fibre Glast Developments Corp. (2019); Tremco U.S. Roofing (2018); BJB Enterprises Inc. (2017b); Euclid Admixture Canada Inc. (2017); NLM (2019b); CPCat (2015); SPIN (2020) The 2016 CDR reports use of DIDP in commercial paints and coatings at concentrations of at least 1% but less than 30% by weight. The 2016 CDR also reports not known or reasonably ascertainable (NKRA) use of this chemical in paints and coatings at concentrations of at least 90% by weight. The 2012 CDR reports use of DIDP in consumer and commercial paints and coatings. Fibre Glast Developments Corp. identifies DIDP as an ingredient in an industrial urethane casting resin (hardener) for automobile, aircraft and marine parts, and tooling applications. Tremco identifies DIDP as an ingredient in a roof coating product and Euclid Admixture Canada identifies DIDP as an ingredient in an (international) concrete coating curing product. BJB enterprises identifies use of this chemical in multiple polyurethane resins. NLM's Haz-Map database identifies use of DIDP in anti-corrosion and anti-fouling paints. SPIN reports use of this chemical in paints, lacquers, varnishes, and anti-fouling agents in Nordic countries. Expected users are consumer and commercial based on CDR's consumer/commercial classification.
Unknown	Plastic and rubber products	Consumer, Commercial	EPA (2014); CPCat (2015); SPIN (2020) The 2012 CDR reports use of DIDP in consumer and commercial plastic and rubber products not covered elsewhere. SPIN reports use of this chemical in plastic additives and auxiliaries, as well as in raw materials for production of plastics. Expected users are consumer and commercial based on CDR's consumer/commercial classification.

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Unknown	Toys, playground, and sporting equipment	Consumer, Commercial	EPA (2014); CPCat (2015); Acoustical Surfaces Inc. (2014); Danish EPA (2006) The 2012 CDR reports use of DIDP in consumer and commercial toys, playground, and sporting equipment, as well as in retail fishing rods and reels. Acoustical Surfaces Inc. identifies use of this chemical in vinyl barriers. Danish EPA identifies use of DIDP in toys and childcare products produced from foam plastic. Expected users are consumer and commercial based on CDR's consumer/commercial classification.
Non-TSCA Uses			
Unknown	Food additives	Unknown	FDA (2018); CPCat (2015); European Chemicals Bureau (2003); Petersen and Jensen (2016) FDA identifies use of DIDP as an indirect food additive in food contact substances. Petersen and Jensen identify use of DIDP in food production equipment containing PVC, such as conveyor belts, hoses, and gloves. CPCat reports use of DNIP in food contact surfaces in the EU and Belgium, however no further information on use in these regions could be found. Expected users are unknown due to the limited availability of information.
DIDP as Contaminant			
Adhesive, Coloration/Pigments/Dyes /Inks, Component of plastic resin or polymer process, Contaminant, Manufacturing additive, Plasticizer /Softener, Protective coating, Source contaminant, Texture	Children's products	Consumer Expected users are based on product types.	Washington State Dept. of Ecology (2020) Washington State Department of Ecology identifies 545 manufacturer-reported uses of DIDP in children's products in Washington and Oregon. CPCat also reports use of DIDP in retail playsets, and Danish EPA identifies use of this chemical in toys and childcare products produced from foam plastic. California prohibits DIDP in concentrations greater than 0.1% in a toy or childcare article intended for use by a child under three years of age if that product can be placed in the child's mouth (California Health and Safety Code § 108937(b)).

Activity or Chemical Function	Sector or Product Type	Expected Users	Comments and References
Recycling and Disposal			
Recycling		Unknown	EPA (2017b) In the 2016 CDR, seven facilities reported that DIDP was not recycled (*e.g.*, recycled, remanufactured, reprocessed, or reused). Four facilities withheld recycling information, and two facilities reported this information as CBI.

2.7 Products Containing DIDP

This section includes a sample of products containing DIDP. When EPA identified a use in Table 2-4 that was associated with a particular product, the product was added to Table 2-5. This is not a comprehensive list of products containing DIDP. In addition, some manufacturers may appear over-represented in this table. This may mean that they are more likely to disclose product ingredients online than other manufacturers but does not imply anything about use of the chemical compared to other manufacturers in this sector.

Table 2-5: Sample of Products Containing DIDP

Use	Expected Users	Product	Manufacturer	Percent in Product (weight, volume, or unspecified)	Source
Adhesive (construction)	Consumer	Heavy Duty Construction Adhesive	Gorilla Glue Company	Unknown	Home Depot (2019a)
Adhesive, caulk, and sealant (all-in-one)	Consumer	Red Devil King Kaul All In One Adhesive, Caulk, Sealant	Red Devil, Inc.	1%, unspecified	Walmart (2019); Red Devil (2016)
Adhesive, filler	Unknown	Genova Products Vinyl Adhesive/Filler - Clear	Genova Products	<30%, by weight	Genova Products (2013)
Adhesive, sealant	Unknown	Bird Barrier Bond	SOUDAL Accumetric	1%, unspecified	SOUDAL Accumetric (2015a)
Adhesive, sealant	Unknown	Marldon MXA 200 600ml	Havwoods Accessories	1 – <5%, unspecified	Havwoods Accessories (2017)
Adhesive, sealant	Unknown	Soudaseal AP	SOUDAL Accumetric	20 – 30%, unspecified	SOUDAL Accumetric (2015b)
Adhesive, sealant	Unknown	Soudaseal FC	SOUDAL Accumetric	1%, unspecified	SOUDAL Accumetric (2015c)
Adhesive, sealant	Commercial	Soudaseal MB, SL	Soudal	Unknown	Soudal (2019a; 2019b)
Adhesive, sealant (marine)	Unknown	3M(TM) Marine Adhesive Sealant Fast Cure 4000 UV, White	3M	10 – 20%, by weight	3M Company (2019)
Casting urethane	Unknown	Fast Cast™	Environmental Technology, Inc.,	10 – 40%, unspecified	Environmental Technology Inc. (2016)
Caulking compound	Unknown	3.0 Gutter & Flashing Sealant Crystal Clear	DAP Products Inc.	Unknown	DAP Products Inc. (2015)

Use	Expected Users	Product	Manufacturer	Percent in Product (weight, volume, or unspecified)	Source
Caulking compound	Unknown	3.0 Window, Door, Trim & Siding Sealant - Crystal Clear	DAP Products Inc.	Unknown	DAP Products Inc. (2019)
Cleaner (heat transfer system)	Unknown	DELF Clean	Mokon	10 – 20%, unspecified	Mokon (2018a)
Cleaner (heat transfer system)	Unknown	DELF Clean Ultra	Mokon	20 – 75%, unspecified	Mokon (2018b)
Cleaner (heat transfer system)	Unknown	Duraclean, Duraclean LSC, Duraclean Ultra	Duratherm	20 – 75%, unspecified	Duratherm (2019a, 2018a, 2018b)
Cleaner (heat transfer system)	Unknown	U-Clean	Duratherm	10 – 20%, unspecified	Duratherm (2018c)
Coating	Unknown	AlphaGuard® MTS	Tremco U.S. Roofing	0.01 – <1%, unspecified	Tremco U.S. Roofing (2018)
Coating	Unknown	Super Diamond Clear 350 - 5 Gal Pail	Euclid Admixture Canada Inc.	1 – <5%, unspecified	Euclid Admixture Canada Inc. (2017)
Colorant	Unknown	Universal C/P Amarillo White	Tremco Canadian Sealants	25 – <50%, unspecified	Tremco Canadian Sealants (2019b)
Colorant	Unknown	Universal C/P Antique Pink, Baptist Brick, Dover Sky, Hartford Green, Kelly Pink, Limestone, Navy Blue, River Rouge Red, Sunset Yellow, Toast Tan	Tremco U.S. Sealants	25 – <50%, unspecified	Tremco U.S. Sealants (2019a, 2019b, 2019c, 2016a, 2016b, 2016c, 2016d, 2016e, 2016f)
Colorant	Unknown	Universal C/P Dark Gray	Tremco Canadian Sealants	50 – <100%, unspecified	Tremco Canadian Sealants (2019c)
Concrete repair compound (activating component)	Unknown	InstaPatch Part B Gray, Tile Red	Rust-Oleum Corporation	24%, by weight	Rust-Oleum Corporation (2018b, 2017)
Curative	Unknown	Euco Qwikjoint 200 Part B - 50 Gallon	Euclid Chemical Company	50 – <100%, unspecified	Euclid Chemical Company (2019)
Curative	Unknown	Quikjoint UVR Standard Gray 1:1 Part B	Euclid Chemical Company	0.01 – <1%, unspecified	Euclid Chemical Company (2017)
Curative (polyurethane)	Unknown	BR-90 Brushable Part B	BJB Enterprises, Inc.	10 – 30%, by weight	BJB Enterprises Inc. (2018)
Curative (polyurethane)	Unknown	WC-766 Part B	BJB Enterprises, Inc.	1 – 5%, by weight	BJB Enterprises Inc. (2017e)

Use	Expected Users	Product	Manufacturer	Percent in Product (weight, volume, or unspecified)	Source
Dispersion	Unknown	DIDP DLD	HB Chemical	65 – 73%, unspecified	HB Chemical (2014c)
Emulsifier	Unknown	Tracer Tech P-133D	Evident Crime Scene Products	Unknown	Evident Crime Scene Products (n.d.)
Epoxy floor patching compound	Unknown	Floor 2-Glk Epoxy Floor Patching Comp Part B	Rust-Oleum Corporation	0.1%, by weight	Rust-Oleum Corporation (2018a)
Flushing fluid	Unknown	QuinSyn Flush Fluid	Quincy Compressor	99%, unspecified	Quincy Compressor (2012)
Hardener	Industrial	Part #3475 Urethane Casting Resin, 75 Shore D, Part B	Fibre Glast Developments Corp.	<30%, unspecified	Fibre Glast Developments Corp. (2019)
Heat Transfer Fluid	Unknown	Duratherm G, Duratherm G-LV	Duratherm	10 – 30%, unspecified	Duratherm (2019b; 2019c)
Joint filler and sealant component (multi-component)	Unknown	Carboseal Flex Joint Part B	Carboline Company	50 – <75%, unspecified	Carboline Company (2019)
Laboratory chemical	Unknown	Diisodecyl Phthalate	Toronto Research Chemicals	Unknown	Toronto Research Chemicals (2017)
Laboratory chemical	Unknown	Diisodecyl phthalate in PE	SPEX CertiPrep, LLC	0.1%, unspecified	SPEX CertiPrep LLC (2017b)
Laboratory chemical	Unknown	Phthalates in Poly(vinyl chloride)	SPEX CertiPrep, LLC	3%, unspecified	SPEX CertiPrep LLC (2017a)
Laboratory chemical	Unknown	Phthalates in Polyethylene Standard	SPEX CertiPrep, LLC	3%, unspecified	SPEX CertiPrep LLC (2017c)
Laboratory chemical	Unknown	Phthalates in Polyethylene Standard w/BPA	SPEX CertiPrep, LLC	3%, unspecified	SPEX CertiPrep LLC (2017d)
Lubricant	Unknown	ANDEROL 497, 3046	Chemtura Corporation	≥10 – <20%, unspecified	Chemtura Corporation (2015a, 2015b)
Lubricant	Unknown	DSL- 125, ULTIMA- 68	Klüber Lubrication NA LP	10 – 30%, by weight	Klüber Lubrication NA LP (2018a, 2018c)
Lubricant	Unknown	PS-200	Klüber Lubrication NA LP	5 – 10%, by weight	Klüber Lubrication NA LP (2018b)
Lubricant (marine)	Unknown	DACNIS SB 68	TOTAL Specialties USA Inc.	1 – 10%, by weight	TOTAL Specialties USA Inc. (2015a)

Use	Expected Users	Product	Manufacturer	Percent in Product (weight, volume, or unspecified)	Source
Lubricant (synthetic compressor)	Unknown	SYNOLAN DE 100	TOTAL Specialties USA Inc.	10 – 40%, by weight	TOTAL Specialties USA Inc. (2015b)
Lubricant	Unknown	XL 700	Ingersoll Rand Industrial Technologies	10 – 40%, by weight	Ingersoll Rand (2015)
Pigment	Unknown	6823 Orange	BJB Enterprises, Inc.	60 – 100%, by weight	BJB Enterprises Inc. (2019a)
Pigment	Unknown	6827 Burnt Sienna	BJB Enterprises, Inc.	30 – 60%, by weight	BJB Enterprises Inc. (2019b)
Pigment thinner	Unknown	6800 Pigment Thinner	BJB Enterprises, Inc.	60 – 100%, by weight	BJB Enterprises Inc. (2017a)
Plasticizer	Unknown	DIDP	HB Chemical	99%, by weight	HB Chemical (2014a)
Plasticizer	Unknown	DIDP-E	HB Chemical	99%, by weight	HB Chemical (2014b)
Plasticizer	Unknown	Diisodecyl Phthalate	Megaloid Laboratories	100%	Megaloid Laboratories (2013)
Plasticizer	Unknown	Plasthall® DIDP	The HallStar Company	100%	The HallStar Company (2015)
Plasticizer	Unknown	SC-22	BJB Enterprises, Inc.	60 – 100%, by weight	BJB Enterprises Inc. (2014)
Plasticizer	Unknown	SKINFLEX III Part C Castable	BJB Enterprises, Inc.	90 – 100%, by weight	BJB Enterprises Inc. (2012)
Resin (polyurethane)	Unknown	M-3180 Part A	BJB Enterprises, Inc.	5 – 10%, by weight	BJB Enterprises Inc. (2013)
Resin (polyurethane)	Unknown	TC-808 Part A	BJB Enterprises, Inc.	10 – 30%, by weight	BJB Enterprises Inc. (2017b)
Resin (polyurethane)	Unknown	TC-885, TC-886 FR Rev 1 Part A	BJB Enterprises, Inc.	15 – 40%, by weight	BJB Enterprises Inc. (2017c; 2017d)
Sealant	Unknown	Childers CP-70	H.B. Fuller Construction Products Inc.	1 – 5%, unspecified	H.B. Fuller Construction Products Inc. (2017)
Sealant	Unknown	Dymonic 100 Redwood Tan - 30 CG CS	Tremco U.S. Sealants	0.1 – <1%, unspecified	Tremco U.S. Sealants (2017a)

Use	Expected Users	Product	Manufacturer	Percent in Product (weight, volume, or unspecified)	Source
Sealant	Unknown	Dymonic 100 White - 30 CTG	Tremco Canadian Sealants	0.1 – 1%, unspecified	Tremco Canadian Sealants (2019a)
Sealant	Unknown	Joint and Termination Sealant	R.M. Lucas Company	10 – 20%, by weight	R.M. Lucas Company (2015a)
Sealant	Unknown	Protecto Sealant 25XL	Protecto Wrap Company	3 – 7%, by weight	Protecto Wrap Company (2008)
Sealant	Unknown	Sakrete Polyurethane Self Leveling Sealant	Sakrete of North America	20 – 40%, by weight	Sakrete of North America (2018)
Sealant	Unknown	Spectrem® 4	Tremco U.S. Sealants	1 – <5%, unspecified	Tremco U.S. Sealants (2018)
Sealant	Unknown	TremGrip Gray Adh. 12 X 300 ML CTG	Tremco Canadian Sealants	1 – <5%, unspecified	Tremco Canadian Sealants (2018)
Sealant	Unknown	TremSeal Pro Limestone-30 CTG CS	Tremco U.S. Roofing	0.1 – 1%, unspecified	Tremco U.S. Roofing (2019)
Sealant	Unknown	Vulkem 116 LV Off White 30 CTG/CS	Tremco U.S. Sealants	10 – <25%, unspecified	Tremco U.S. Sealants (2017b)
Sealant (polyurethane)	Unknown	Vulkem 116 Gray, Limestone, LV Buff 30 CTG/CS, White	Tremco Incorporated	15 – 40%, by weight	Tremco Incorporated (2010a, 2010b, 2010c, 2010d)
Sealant (polyurethane)	Unknown	Watertite 10.1-Oz 12 Pk Polyurethan SLR	Rust-Oleum Corporation	0.1 – <1%, by weight	Rust-Oleum Corporation (2015)
Sealant (concrete and masonry)	Consumer	Zinsser 10 oz. Watertite Waterproofing Poly Seal Tube	Rust-Oleum Corporation	0.1 – 1%, by weight	Home Depot (2019b) _ENREF_78
Sealer	Unknown	Crystal Shine	SpecChem	<2%, by weight	SpecChem (2018)
Sealer	Unknown	Semi-Selfleveling Sealer	R.M. Lucas Company	10 – 20%, by weight	R.M. Lucas Company (2015b)
Seam sealer (automotive)	Unknown	3M™ MSP Seam Sealer – White, PN 08369	3M	1 – 5%, by weight	3M Company (2018)
Transmission conditioner (automatic)	Unknown	BG ATC Plus	BG Products Inc.	3 – 7%, unspecified	BG Products Inc. (2016)
Vinyl Barrier	Commercial, Consumer	Vinyl Barrier	Acoustical Surfaces, Inc.	0.23%, unspecified	Acoustical Surfaces Inc. (2014)

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APPENDICES

Appendix A Method for Uses and Products Tables

To compile the uses, EPA searched publicly available databases listed in Table A-1 and conducted additional Google searches to clarify uses or find current products in commerce.

Table A-1: Sources Searched for Uses of DIDP

Title	Author and Year	Search Term(s)	Found Use Information? [1]
Sources searched for all use reports			
California Links to Pesticides Data	California Dept of Pesticide Regulation (2013)	26761-40-0; 68515-49-1	No
Canada Chemicals Management Plan information sheets	Government of Canada (2018)	Diisodecyl; 1,2-Benzenedicarboxylic	No
Chemical and Product Categories CPCat	CPCat (2015)	26761-40-0; 68515-49-1	Yes
ChemView [2]	EPA (2018a)	26761-40-0; 68515-49-1	Yes
Children's Safe Product Act Reported Data	Washington State Dept. of Ecology (2020)	26761-40-0; 68515-49-1	Yes
Consumer Product Information Database (CPID)	DeLima Associates (2018)	26761-40-0; 68515-49-1	Yes
Danish surveys on chemicals in consumer products	Danish EPA (2018)	N/A, There is no search but report titles were checked for possible information on the chemical	Yes
Datamyne	Descartes Datamyne (2018)	Diisodecyl; DIDP	No
DrugBank	DrugBank (2018)	26761-40-0; 68515-49-1; diisodecyl; DIDP	No
eChemPortal [2]	OECD (2018)	26761-40-0; 68515-49-1	Yes
Envirofacts [2]	EPA (2018b)	26761-40-0; 68515-49-1	No
European Chemicals Agency (ECHA) Registration Dossier	ECHA (2019)	26761-40-0; 68515-49-1	Yes
Functional Use Database (FUse)	EPA (2017a)	26761-40-0; 68515-49-1	Yes
Kirk-Othmer Encyclopedia of Chemical Technology	Kirk-Othmer (2006)	DIDP; diisodecyl phthalate	No
Non-Confidential 2012 Chemical Data Reporting (CDR)	EPA (2014b)	26761-40-0; 68515-49-1	Yes
Non-Confidential 2016 CDR	EPA (2017b)	26761-40-0; 68515-49-1	Yes
PubChem Compound	NLM (2019a)	26761-40-0; 68515-49-1	Yes
Safer Chemical Ingredients List (SCIL)	EPA (2018d)	26761-40-0; 68515-49-1	No
Synapse Information Resources [2]	Synapse Information Resources (n.d.)	diisodecyl; DIDP	No
Resource Conservation and Recovery Act (RCRA)	EPA (2018c)	26761-40-0; 68515-49-1	No

Title	Author and Year	Search Term(s)	Found Use Information? [1]
Scorecard: The Pollution Information Site	GoodGuide (2011)	26761-40-0; 68515-49-1	Yes
Skin Deep Cosmetics Database	EWG (2019)	26761-40-0; 68515-49-1	No
Substances in Preparations in Nordic Countries	SPIN (2020)	26761-40-0; 68515-49-1	Yes
Toxics Release Inventory (TRI)	EPA (2018e)	26761-40-0; 68515-49-1	No
TOXNET [2]	NLM (2019c)	26761-40-0; 68515-49-1	Yes
Ullmann's Encyclopedia of Industrial Chemistry	Ullmann's (2000)	DIDP; diisodecyl phthalate	Yes
Additional sources identified from reasonably available information			
American Chemistry Council	American Chemistry Council (2018)	Incidentally identified while researching into details of this chemical's uses and products.	Yes
European Chemicals Bureau	European Chemicals Bureau (2003)		
Petersen and Jensen	Petersen and Jensen (2016)		
Product SDS	See Table 2-5		

1. If use information was found in the resource, it will appear in Table 2-4 unless otherwise noted.
2. This source is a group of databases; thus the exact resource(s) it led to will be cited instead of the database as whole.

Appendix B Tier 2 Uses of DIDP

This appendix contains uses classified as Tier 2. These may be historic, non-TSCA use, or more anecdotal.

Table B-1 Tier 2 Uses of DIDP

Sector or Product Type	Expected Users	Comments and References
Uses with Minimal Substantiation		
Building and construction	Unknown Expected users are unknown due to the limited availability of information.	SPIN (2020) SPIN reports use of DIDP in building materials and additives, construction materials, fillers and padding materials, general repair, insulation, and flame retardants in Nordic countries. SPIN also reports use of this chemical in industrial bricklaying, building of ships and boats, civil engineering, construction, floor and wall coverings, joinery installation. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Cleaning/washing agents	Unknown Expected users are unknown due to the limited availability of information.	SPIN (2020) SPIN reports use of DIDP in cleaning/washing agents in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Fabrics, textiles and apparel	Unknown Expected users are unknown due to the limited availability of information.	NLM (2019b); CPCat (2015) NLM's Haz-Map database identifies use of DIDP in textile inks. CPCat reports use of DIDP in fabrics, textiles and apparel.
Fuels	Commercial This use is identified under ECHA's uses by professional workers.	ECHA (2019) ECHA identifies use of DIDP in commercial fuels (for use in fuel additive and additized fuels) in European countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Hydraulic fluid manufacturing	Industrial This use is identified under ECHA's uses at industrial sites.	ECHA (2019) ECHA identifies use of DIDP in the manufacture of hydraulic fluids in European countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.

Sector or Product Type	Expected Users	Comments and References
Lubricant and grease manufacturing	Industrial This use is identified under ECHA's uses at industrial sites.	ECHA (2019) ECHA identifies use of DIDP in the manufacture of lubricants and greases in European countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Manufacture of fabricated metal products	Industrial Expected users are based on SPIN's industrial use databases.	SPIN (2020) SPIN reports use of DIDP in the manufacture of and industry for fabricated metal products, except machinery and equipment, in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Manufacture of machinery and equipment	Industrial Expected users are based on SPIN's industrial use databases.	SPIN (2020) SPIN reports use of DIDP in the manufacture, repair, and installation of, and industry for, machinery and equipment in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Manufacture of motor vehicles, trailers and semi-trailers	Industrial Expected users are based on SPIN's industrial use databases.	SPIN (2020) SPIN reports use of DIDP in the manufacture of and industry for motor vehicles, trailers, semi-trailers, and other transportation equipment in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Manufacture of other non-metallic mineral products	Industrial Expected users are based on SPIN's industrial use databases.	SPIN (2020) SPIN reports use of DIDP in the manufacture of other non-metallic mineral products in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Manufacture of wood and of products of wood and cork, except furniture; manufacture of articles of straw and plaiting materials	Industrial Expected users are based on SPIN's industrial use databases.	SPIN (2020) SPIN reports use of DIDP in the manufacture of wood, products of wood and cork (except furniture), articles of straw, and plaiting materials in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.

Sector or Product Type	Expected Users	Comments and References
Medical device manufacturing	Industrial This use is identified under ECHA's uses at industrial sites.	ECHA (2019); SPIN (2020) ECHA and SPIN identify use of DIDP in the manufacture of medical devices in European and Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Metal working fluids manufacturing	Industrial This use is identified under ECHA's uses at industrial sites.	ECHA (2019) ECHA identifies use of DIDP in the manufacture of metal working fluids in European countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Personal care products	Consumer Danish EPA mapped this chemical through a survey of consumer products.	Danish EPA (2003b); ECHA (2019) Danish EPA identifies use of DIDP in earplugs, and ECHA identifies use in cosmetics and personal care products in European Countries. No further information on this use could be found, and it is unknown whether it is an ongoing use in the United States.
Pesticide	Unknown Expected users are unknown due to the limited availability of information.	EPA (2019); SPIN (2020) EPA identifies DIDP as an inert ingredient for use in nonfood pesticides. CPCat identifies DIDP as a FIFRA- and OPPIN-reported inert pesticide ingredient. SPIN identifies use of this chemical in non-agricultural pesticides and preservatives in Nordic countries.
Polish and wax blend manufacturing	Industrial Expected users are based on ECHA's uses at industrial sites.	ECHA (2019) ECHA identifies use of this chemical in the manufacture of polishes and wax blends in European countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Process regulators	Unknown Expected users are unknown due to the limited availability of information.	SPIN (2020) SPIN reports use of DIDP in process regulators in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Softeners	Industrial Expected users are based on reporting of this use under GoodGuide's Industrial Uses.	GoodGuide (2011); SPIN (2020) GoodGuide's Pollution Scorecard identifies use of DIDP as a plasticizer in industrial softeners. SPIN reports use of this chemical in softeners in Nordic countries.

Sector or Product Type	Expected Users	Comments and References
Stabilizers	Unknown Expected users are unknown due to the limited availability of information.	SPIN (2020) SPIN reports use of DIDP in stabilizers in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.
Transportation products	Unknown Expected users are unknown due to the limited availability of information.	CPCat (2015) CPCat reports use of DIDP in transportation products. Expected users are unknown due to the limited availability of information.
Utilities	Industrial	SPIN (2020) SPIN reports use of DIDP in electricity, gas, steam and air conditioning supply in Nordic countries. No further information about this use could be found and it is unknown whether this is an ongoing use in the United States.