

Creation Date Oct-2013

Revision Date Oct-2018

Revision Number 2

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE **COMPANY/UNDERTAKING**

1.1. Product identification

Product Description:	Isopropyl ether
Product Grade:	SQ
Cat No. :	Q26875, Q26877
Synonyms	2-Isopropoxypropane; DIPE; Diisopropyl ether
CAS-No	108-20-3
EC-No.	204-881-4
Molecular Formula	C6 H14 O
Reach Registration Number	-

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended Use	Laboratory chemicals.
Uses advised against	No Information available
1.3. Details of the supplier of th	<u>e safety data sheet</u>

Company	Thermo Fisher Scientific India Pvt. Ltd
	403-404, B-wing, Delphi, Hiranandani Business Park,
	Powai, Mumbai 400076, INDIA.
E-mail address	laboratorysolutions@thermofisher.com

1.4. Emergency telephone number

India Toll Free: 18 00 22 22 30 Chemtrec US: (800)424-9300 Chemtrec EU: 001(202)483-7616

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

CI P	Classification	- Regulation	(FC)) No 1272/2008
	olussification	- Regulation		

Physical hazards Flammable liquids

Health hazards

Specific target organ toxicity - (single exposure)

<u>Environmental hazards</u> Based on available data, the classification criteria are not met

2.2. Label elements

FSUD5002

Category 2

Category 3

Isopropyl ether



Signal Word

Danger

Hazard Statements

H225 - Highly flammable liquid and vapor

H336 - May cause drowsiness or dizziness

EUH019 - May form explosive peroxides

EUH066 - Repeated exposure may cause skin dryness or cracking

Precautionary Statements

P210 - Keep away from heat/sparks/open flames/hot surfaces. - No smoking

P233 - Keep container tightly closed

P240 - Ground/Bond container and receiving equipment

P261 - Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray

2.3. Other hazards

Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB)

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances

Component	CAS-No	EC-No.	Weight %	CLP Classification - Regulation (EC) No 1272/2008
Isopropyl ether	108-20-3	EEC No. 203-560-6	> 99	Flam. Liq. 2 (H225) STOT SE 3 (H336) (EUH019) (EUH066)
2,6-Di-tert-butyl-p-cresol	128-37-0	EEC No. 204-881-4	< 0.01	Aquatic Acute 1 (H400) Aquatic Chronic 1 (H410)

Reach Registration Number

Full text of Hazard Statements: see section 16

SECTION 4: FIRST AID MEASURES

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4.1. Description of first aid measures

Eye Contact	Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention if symptoms occur.
Skin Contact	Wash off immediately with plenty of water for at least 15 minutes. Get medical attention if symptoms occur.
Ingestion	Do not induce vomiting. Obtain medical attention.
Inhalation	Move to fresh air. If breathing is difficult, give oxygen. Get medical attention if symptoms occur.
Protection of First-aiders	No special precautions required.

Isopropyl ether

4.2. Most important symptoms and effects, both acute and delayed

Breathing difficulties. Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting

4.3. Indication of any immediate medical attention and special treatment needed

Notes to Physician

Treat symptomatically. Symptoms may be delayed.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media

Suitable Extinguishing Media

CO₂, dry chemical, dry sand, alcohol-resistant foam. Cool closed containers exposed to fire with water spray.

Extinguishing media which must not be used for safety reasons Do not use a solid water stream as it may scatter and spread fire.

5.2. Special hazards arising from the substance or mixture

Flammable. Risk of ignition. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Containers may explode when heated. May form explosive peroxides. Thermal decomposition can lead to release of irritating gases and vapors. Keep product and empty container away from heat and sources of ignition.

Hazardous Combustion Products

Carbon monoxide (CO), Carbon dioxide (CO₂), peroxides.

5.3. Advice for firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Remove all sources of ignition. Take precautionary measures against static discharges. Avoid contact with skin, eyes and clothing.

6.2. Environmental precautions

Avoid release to the environment. See Section 12 for additional ecological information.

6.3. Methods and material for containment and cleaning up

Remove all sources of ignition. Soak up with inert absorbent material. Keep in suitable, closed containers for disposal. Take precautionary measures against static discharges.

6.4. Reference to other sections

Refer to protective measures listed in Sections 8 and 13.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for safe handling

Wear personal protective equipment. Ensure adequate ventilation. Use spark-proof tools and explosion-proof equipment. Avoid contact with skin and eyes. Do not breathe vapors or spray mist. Do not ingest. Keep away from open flames, hot surfaces and sources of ignition. Take precautionary measures against static discharges. If peroxide formation is suspected, do not open or move container.

Hygiene Measures

Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not eat, drink or smoke when using this product. Remove and wash contaminated clothing before re-use. Wash hands before breaks and at the end of workday.

7.2. Conditions for safe storage, including any incompatibilities

Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from direct sunlight. Keep away from heat and sources of ignition. Keep under nitrogen. Flammables area. May form explosive peroxides. Should crystals form in a peroxidizable liquid, peroxidation may have occurred and the product should be considered extremely dangerous. In this instance, the container should only be opened remotely by professionals.

7.3. Specific end use(s)

Use in laboratories

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Exposure limits

List source(s): **UK** - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. **IRE** - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Component	European Union	The United Kingdom	France	Belgium	Spain
Isopropyl ether		STEL: 310 ppm 15 min	TWA / VME: 250 ppm (8	TWA: 250 ppm 8 uren	STEL / VLA-EC: 310
		STEL: 1310 mg/m ³ 15	heures).	TWA: 1055 mg/m ³ 8	ppm (15 minutos).
		min	TWA / VME: 1050	uren	STEL / VLA-EC: 1310
		TWA: 250 ppm 8 hr	mg/m ³ (8 heures).	STEL: 310 ppm 15	mg/m ³ (15 minutos).
		TWA: 1060 mg/m ³ 8 hr		minuten	TWA / VLA-ED: 250
				STEL: 1319 mg/m ³ 15	ppm (8 horas)
				minuten	TWA / VLA-ED: 1060
					mg/m³ (8 horas)
2,6-Di-tert-butyl-p-cre		STEL: 30 mg/m ³ 15 min	TWA / VME: 10 mg/m ³	TWA: 2 mg/m ³ 8 uren	TWA / VLA-ED: 10
sol		TWA: 10 mg/m ³ 8 hr	(8 heures).	2	mg/m ³ (8 horas)

Component	Italy	Germany	Portugal	The Netherlands	Finland
Isopropyl ether		TWA: 200 ppm (8 Stunden). AGW - exposure factor 2 TWA: 850 mg/m ³ (8 Stunden). AGW - exposure factor 2 TWA: 200 ppm (8 Stunden). MAK TWA: 850 mg/m ³ (8 Stunden). MAK Höhepunkt: 400 ppm Höhepunkt: 1700 mg/m ³	STEL: 310 ppm 15 minutos TWA: 250 ppm 8 horas		TWA: 250 ppm 8 tunteina STEL: 320 ppm 15 minuutteina
2,6-Di-tert-butyl-p-cre sol		TWA: 10 mg/m ³ (8 Stunden). AGW - exposure factor 4 TWA: 10 mg/m ³ (8 Stunden). MAK can occur as vapor and aerosol at the same time Höhepunkt: 40 mg/m ³	TWA: 2 mg/m ³ 8 horas		TWA: 10 mg/m³ 8 tunteina STEL: 20 mg/m³ 15 minuutteina

Component	Austria	Denmark	Switzerland	Poland	Norway
Isopropyl ether	MAK-TMW: 250 ppm 8	TWA: 250 ppm 8 timer	STEL: 400 ppm 15	TWA: 1000 mg/m ³ 8	TWA: 125 ppm 8 timer
	Stunden	TWA: 1050 mg/m ³ 8	Minuten	godzinach	TWA: 525 mg/m ³ 8 timer

Isopropyl ether

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Γ. Γ.	/AK-TMW: 1050 mg/m³ 8 Stunden	timer	STEL: 1700 mg/m ³ 15 Minuten TWA: 200 ppm 8 Stunden TWA: 850 mg/m ³ 8 Stunden	STEL: 125 ppm 15 minutter. STEL: 525 mg/m³ 15 minutter.
2,6-Di-tert-butyl-p-cre N sol	MAK-TMW: 10 mg/m³ 8 Stunden	TWA: 10 mg/m ³ 8 timer	STEL: 40 mg/m ³ 15 Minuten TWA: 10 mg/m ³ 8 Stunden	

Component	Bulgaria	Croatia	Ireland	Cyprus	Czech Republic
Isopropyl ether		TWA-GVI: 250 ppm 8 satima. TWA-GVI: 1060 mg/m ³ 8 satima. STEL-KGVI: 310 ppm 15 minutama. STEL- KGVI: 1310 mg/m ³ 15 minutama.	TWA: 250 ppm 8 hr. TWA: 1050 mg/m ³ 8 hr. STEL: 310 ppm 15 min STEL: 1320 mg/m ³ 15 min		
2,6-Di-tert-butyl-p-cre	TWA: 10 mg/m ³	TWA-GVI: 10 mg/m ³ 8	TWA: 10 mg/m ³ 8 hr.		
sol	STEL : 50 mg/m ³	satima.	STEL: 30 mg/m ³ 15 min		

Component	Estonia	Gibraltar	Greece	Hungary	Iceland
Isopropyl ether			TWA: 500 ppm TWA: 2100 mg/m ³		TWA: 250 ppm 8 klukkustundum. TWA: 1050 mg/m ³ 8
					klukkustundum. Ceiling: 500 ppm Ceiling: 2100 mg/m ³
2,6-Di-tert-butyl-p-cre sol			TWA: 10 mg/m ³		TWA: 10 mg/m ³ 8 klukkustundum. Ceiling: 20 mg/m ³

Component	Latvia	Lithuania	Luxembourg	Malta	Romania
Isopropyl ether					TWA: 1000 mg/m ³ 8 ore
					STEL: 1500 mg/m ³ 15
					minute

Component	Russia	Slovak Republic	Slovenia	Sweden	Turkey
Isopropyl ether	MAC: 100 mg/m ³		TWA: 500 ppm 8 urah TWA: 2100 mg/m ³ 8 urah		
2,6-Di-tert-butyl-p-cre			TWA: 10 mg/m ³ 8 urah		
sol			inhalable fraction		

Biological limit values

This product, as supplied, does not contain any hazardous materials with biological limits established by the region specific regulatory bodies.

Monitoring methods BS EN 14042:2003 Title Identifier: Workplace atmospheres. Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents.

MDHS70 General methods for sampling airborne gases and vapours

MDHS 88 Volatile organic compounds in air. Laboratory method using diffusive samplers, solvent desorption and gas chromatography

MDHS 96 Volatile organic compounds in air - Laboratory method using pumped solid sorbent tubes, solvent desorption and gas chromatography

Derived No Effect Level (DNEL) See table for values

Route of exposure	Acute effects (local)	Acute effects	Chronic effects	Chronic effects
		(systemic)	(local)	(systemic)
Oral				

Isopropyl ether

Dermal	121.4 mg/kg
Inhalation	850 mg/m³

Predicted No Effect Concentration See values below. (PNEC)

FNEC)	
Fresh water	0.19 mg/l
Fresh water sediment	2.79 mg/kg
Marine water	0.019 mg/l
Marine water sediment	0.28 mg/kg
Soil (Agriculture)	0.47 mg/kg

8.2. Exposure controls

Engineering Measures

Ensure adequate ventilation, especially in confined areas. Use explosion-proof electrical/ventilating/lighting/equipment. Ensure that eyewash stations and safety showers are close to the workstation location.

Wherever possible, engineering control measures such as the isolation or enclosure of the process, the introduction of process or equipment changes to minimise release or contact, and the use of properly designed ventilation systems, should be adopted to control hazardous materials at source

Personal protective equipment

Eye Protection	
Hand Protection	

Goggles (European standard - EN 166) Protective gloves

ſ	Glove material	Breakthrough time	Glove thickness	EU standard	Glove comments
	Viton (R)	> 480 minutes	0.4 mm	EN 374 Level 6	As tested under EN374-3 Determination of
	Nitrile rubber	> 480 minutes	0.35 mm		Resistance to Permeation by Chemicals
	PVC	> 120 minutes	0.5 mm		
	Skin and hady prof	Moor on	proprieto protectivo	aloves and elething	to provent akin expegure

Skin and body protection Wear appropriate protective gloves and clothing to prevent skin exposure

Inspect gloves before use.

Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. (Refer to manufacturer/supplier for information)

Ensure gloves are suitable for the task: Chemical compatability, Dexterity, Operational conditions, User susceptibility, e.g. sensitisation effects, also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion.

Remove gloves with care avoiding skin contamination.

Respiratory Protection	Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced.
Large scale/emergency use	Use a NIOSH/MSHA or European Standard EN 136 approved respirator if exposure limits are exceeded or if irritation or other symptoms are experienced Recommended Filter type: low boiling organic solvent Type A conforming to EN 141
Small scale/Laboratory use	Maintain adequate ventilation No personal respiratory protective equipment normally required

Environmental exposure controls

Prevent product from entering drains.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties

Appearance	Colorless
Physical State	Liquid
Odor	Strong Ether
Odor Threshold	No data available
pH	No information available
Melting Point/Range	-85.5 °C / -121.9 °F
Softening Point	No data available

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Molecular Formula Molecular Weight Refractive index	C6 H14 O 102.18 1.367 - 1.369 @ 20 °C			
9.2. Other information				
Oxidizing Properties	No information available			
Explosive Properties	Not explosive	Vapors may form explosive mixtures with air		
Viscosity	0.38 mPa s at 25 °C			
Autoignition Temperature Decomposition Temperature	No data available			
2,6-Di-tert-butyl-p-cresol	4.17 405 °C / 761 °F			
Isopropyl ether	1.52			
Component	log Pow			
Partition Coefficient (n-octanol/w	ater)			
Solubility in other solvents	No information available			
Water Solubility	9 g/L (20°C)			
Specific Gravity / Density Bulk Density	Not applicable	Liquid		
Vapor Density	0.720	@ 20 °C		
Vapor Pressure	Upper 21 180 mbar @ 20 °C 1.42			
Explosion Limits	Lower 1.1			
Flammability (solid,gas)	Not applicable	Liquid		
Flash Point Evaporation Rate	-29 °C / -20.2 °F No data available	Method - No information available		
Boiling Point/Range	68 °C / 154.4 °F	@ 760 mmHg		

SECTION 10: STABILITY AND REACTIVITY		
10.1. Reactivity	Yes	
10.2. Chemical stability May form explosive peroxides: Air sensitive: Light sensitive: heat sensitive		
10.3. Possibility of hazardous reactions		

Hazardous Polymerization Hazardous Reactions	Hazardous polymerization does not occur. May form explosive peroxides.
10.4. Conditions to avoid	Incompatible products. Keep away from open flames, hot surfaces and sources of ignition. Excess heat. Exposure to air. Exposure to light.
10.5. Incompatible materials	Acids. Strong oxidizing agents. Amines. Aldehydes.

10.6. Hazardous decomposition products

Carbon monoxide (CO). Carbon dioxide (CO₂). peroxides.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on toxicological effects

Product Information

Isopropyl ether

(a) acute toxicity;	
Oral	Based on available data, the classification criteria are not met
Dermal	Based on available data, the classification criteria are not met
Inhalation	Based on available data, the classification criteria are not met

	Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
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Isopropyl ether

Isopropyl ether	LD50 = 4700 mg/kg (Rat)	LD50 = 20 mL/kg(Rabbit)				
2,6-Di-tert-butyl-p-cresol	>2000 mg/kg (Rat)	>2000 mg/kg (Rat)				
(b) skin corrosion/irritation;	Based on available data, the classification criteria are not met					
(c) serious eye damage/irritation;	Based on available data, the classification criteria are not met					
(d) respiratory or skin sensitization; Respiratory Skin	Based on available data, the classification criteria are not met Based on available data, the classification criteria are not met					
(e) germ cell mutagenicity;	Based on available data, the classification criteria are not met					
(f) carcinogenicity;	Based on available data, the classification criteria are not met					
	There are no known carcinogenic chemicals in this product					
(g) reproductive toxicity;	Based on available data, the classification criteria are not met					
(h) STOT-single exposure;	Category 3					
Results / Target organs	Central nervous system (CNS).					
(i) STOT-repeated exposure;	Based on available data, the classification criteria are not met					
Target Organs	No information available.					
(j) aspiration hazard; Symptoms / effects,both acute and	Based on available data, the classification criteria are not met d Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomitin					

delayed

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity Ecotoxicity effects

Component		Freshwater Fish	Water Flea	Freshwater Algae	Microtox
Isopropyl ethe	r	LC50: = 7000 mg/L, 96h static (Lepomis macrochirus) LC50: = 91.7 mg/L, 96h flow-through (Pimephales promelas)	EC50: = 190 mg/L, 48h (Daphnia magna)		EC50 = 500 mg/L 5 min
2,6-Di-tert-butyl-p-o	cresol	LC50 = 0.199 mg/L 96h	EC50 >0.31 mg/L 48h	EC50 = 0.758 mg/L 96h EC50 = 6 mg/L 72 h	EC50 = 7.82 mg/L 5 min EC50 = 8.57 mg/L 15 min EC50 = 8.98 mg/L 30 min

12.2. Persistence and degradability

Persistence Persistence is unlikely, based on information available.

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Component	Degradability
lsopropyl ether 108-20-3 (> 99)	11 % (5 days)

12.3. Bioaccumulative potential Bioaccumulation is unlikely

Component	log Pow	Bioconcentration factor (BCF)
Isopropyl ether	1.52	4.67 - 6
2,6-Di-tert-butyl-p-cresol	4.17	230 - 2500 OECD 305C

Isopropyl ether		

<u>12.4. Mobility in soil</u>	The product contains volatile organic compounds (VOC) which will evaporate easily from all surfaces. Will likely be mobile in the environment due to its volatility. Disperses rapidly in air
<u>12.5. Results of PBT and vPvB</u> assessment	Substance is not considered persistent, bioaccumulative and toxic (PBT) / very persistent and very bioaccumulative (vPvB).
<u>12.6. Other adverse effects</u> Endocrine Disruptor Information Persistent Organic Pollutant Ozone Depletion Potential	This product does not contain any known or suspected endocrine disruptors This product does not contain any known or suspected substance This product does not contain any known or suspected substance

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste from Residues / Unused Products	Waste is classified as hazardous. Dispose of in accordance with the European Directives on waste and hazardous waste. Dispose of in accordance with local regulations.
Contaminated Packaging	Dispose of this container to hazardous or special waste collection point. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep product and empty container away from heat and sources of ignition.
European Waste Catalogue (EWC)	According to the European Waste Catalogue, Waste Codes are not product specific, but application specific.
Other Information	Do not dispose of waste into sewer. Waste codes should be assigned by the user based on the application for which the product was used. Can be incinerated, when in compliance with local regulations.

SECTION 14: TRANSPORT INFORMATION

IMDG/IMO

<u>14.1. UN number</u> 14.2. UN proper shipping name 14.3. Transport hazard class(es) 14.4. Packing group	UN1159 DIISOPROPYL ETHER 3 II
ADR	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> 14.4. Packing group	UN1159 DIISOPROPYL ETHER 3 II
IATA	
<u>14.1. UN number</u> <u>14.2. UN proper shipping name</u> <u>14.3. Transport hazard class(es)</u> <u>14.4. Packing group</u>	UN1159 DIISOPROPYL ETHER 3 II
14.5. Environmental hazards	No hazards identified
14.6. Special precautions for user	No special precautions required
14.7. Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code	Not applicable, packaged goods

SECTION 15: REGULATORY INFORMATION

15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

International Inventories		X = listed	l								
Component	EINECS	ELINCS	NLP	TSCA	DSL	NDSL	PICCS	ENCS	IECSC	AICS	KECL
Isopropyl ether	203-560-6	-		Х	Х	-	Х	Х	Х	Х	Х
2,6-Di-tert-butyl-p-cresol	204-881-4	-		Х	Х	-	Х	Х	Х	Х	Х

Component	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Safety Report Requirements
Isopropyl ether	50, 000 tonnes	5, 000 tonnes

National Regulations

Component	Germany - Water Classification (VwVwS)	Germany - TA-Luft Class
Isopropyl ether	WGK 1	
2,6-Di-tert-butyl-p-cresol	WGK 1 WGK 2	

Component	France - INRS (Tables of occupational diseases)	
Isopropyl ether	Tableaux des maladies professionnelles (TMP) - RG 84	

Take note of Control of Substances Hazardous to Health Regulations (COSHH) 2002 and 2005 Amendment.

Take note of Dir 94/33/EC on the protection of young people at work

Take note of Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work

15.2. Chemical safety assessment

A Chemical Safety Assessment/Report (CSA/CSR) has been conducted by the manufacturer/importer

SECTION 16: OTHER INFORMATION

Full Text of H-/EUH-Statements Referred to Under Section 3

H225 - Highly flammable liquid and vapor

H336 - May cause drowsiness or dizziness

EUH019 - May form explosive peroxides

EUH066 - Repeated exposure may cause skin dryness or cracking

Legend

CAS - Chemical Abstracts Service TSCA - United States Toxic Substances Control Act Section 8(b) Inventory EINECS/ELINCS - European Inventory of Existing Commercial Chemical DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances/EU List of Notified Chemical Substances Substances List **ENCS** - Japanese Existing and New Chemical Substances **PICCS** - Philippines Inventory of Chemicals and Chemical Substances IECSC - Chinese Inventory of Existing Chemical Substances AICS - Australian Inventory of Chemical Substances KECL - Korean Existing and Evaluated Chemical Substances NZIOC - New Zealand Inventory of Chemicals WEL - Workplace Exposure Limit TWA - Time Weighted Average ACGIH - American Conference of Governmental Industrial Hygienists IARC - International Agency for Research on Cancer **PNEC** - Predicted No Effect Concentration **DNEL** - Derived No Effect Level LD50 - Lethal Dose 50%

RPE - Respiratory Protective Equipment

LC50 - Lethal Concentration 50%

NOEC - No Observed Effect Concentration

PBT - Persistent, Bioaccumulative, Toxic

ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road IMO/IMDG - International Maritime Organization/International Maritime Dangerous Goods Code OECD - Organisation for Economic Co-operation and Development BCF - Bioconcentration factor Key literature references and sources for data

POW - Partition coefficient Octanol:Water vPvB - very Persistent, very Bioaccumulative

ICAO/IATA - International Civil Aviation Organization/International Air Transport Association MARPOL - International Convention for the Prevention of Pollution from Ships ATE - Acute Toxicity Estimate

VOC - Volatile Organic Compounds

EC50 - Effective Concentration 50%

Isopropyl ether

Suppliers safety data sheet, Chemadvisor - LOLI, Merck index, RTECS

Training Advice

Chemical hazard awareness training, incorporating labelling, Safety Data Sheets (SDS), Personal Protective Equipment (PPE) and hygiene.

Use of personal protective equipment, covering appropriate selection, compatibility, breakthrough thresholds, care, maintenance, fit and standards.

First aid for chemical exposure, including the use of eye wash and safety showers.

Fire prevention and fighting, identifying hazards and risks, static electricity, explosive atmospheres posed by vapours and dusts. Chemical incident response training.

Creation Date	Oct-2013
Next Revision Date	Oct-2023
Revision Summary	SDS section 1 updated and update of Format.

This safety data sheet complies with the requirements of Regulation (EC) No. 1907/2006

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

End of Safety Data Sheet