

Safety Data Sheet

According to Annex II to REACH - Regulation 2020/878 and to Annex II to UK REACH

Section 1 Identification of the substance/mixture and of the company/undertaking

1.1 Product identifier

Product name Sitol Primer Glass

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

Intended use

Single-component polyurethane primer for the treatment of mineral and organic glass in the nautical industry.

For professional and industrial use only

1.3 Details of the supplier of the safety data sheet

Company name	TORGGLER S.R.L.
Full address	Via Prati Nuovi 9
Town	Marlengo
Postal code	39020
Province	BZ
Country	Italy
Phone number	+39 0473 282400
Fax	+39 0473 282501
e-mail address of the competent person responsible for the Safety Data Sheet	reach@torggler.com

1.4 Emergency telephone number

For urgent inquiries refer to +39 348 662 70 93 (08.00 - 17.30)

Section 2 Hazards identification

2.1 Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878. Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Eye irritation, category 2	H319	Causes serious eye irritation.
Respiratory sensitization, category 1	H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.

2.2 Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms



Signal word

Danger

Section 2

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H336	May cause drowsiness or dizziness.

Precautionary statements

P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P261	Avoid breathing mist, spray, vapours.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P342+P311	If experiencing respiratory symptoms: Call a poison center/doctor.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P370+P378	In case of fire: Use water, foam, chemical powder, sand to extinguish.

Supplementary hazard statements

EUH066	Repeated exposure may cause skin dryness or cracking.
EUH204	Contains isocyanates. May produce an allergic reaction.

Contains

DIPHENYLMETHANE-4,4'-DIISOCYANATE
ETHYL METHYL KETONE
ISOPHORONE DI-ISOCYANATE
Dimethylbis[(1-oxoneodecyl)oxy]stannane

As from 24 August 2023 adequate training is required before industrial or professional use.

VOC (Directive 2004/42/EC)

Product not intended for the uses provided for in Directive 2004/42/EC

Additional information according to EC Regulation no. 552/2009 of 22 June 2009:

The use of this product may cause allergic reactions in people already sensitized to diisocyanates. People with asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation, unless a protective mask with a suitable gas filter (e.g. type A1 according to EN 14387) is used.

2.3 Other hazards

During use, it can form explosive/flammable mixtures with air.

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.
The product does not contain substances with endocrine disrupting properties in concentration $\geq$ 0.1%.

Section 3 Composition/information on ingredients

3.2 Mixtures

ETHYL METHYL KETONE

Concentration	$55 \leq x < 67 \%$
CAS number	78-93-3
EC number	201-159-0
INDEX number	606-002-00-3
Hazard classification	- Flam. Liq. 2; H225 - Eye Irrit. 2; H319 - STOT SE 3; H336
Additional classification	EUH066
Substance with a community workplace exposure limit.	

Section 3

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Concentration	$0.5 \leq x < 1 \%$
CAS number	101-68-8
EC number	202-966-0
INDEX number	615-005-00-9
Registration Number	01-2119457014-47-xxxx
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1; H317 ▪ Eye Irrit. 2; H319 ▪ Acute Tox. 4; H332 ▪ Resp. Sens. 1; H334 ▪ STOT SE 3; H335 ▪ Carc. 2; H351 ▪ STOT RE 2; H373
Specific concentration limits	▪ Resp. Sens. 1; H334: $\geq 0.1 \%$ ▪ STOT SE 3; H335: $\geq 5 \%$ ▪ Skin Irrit. 2; H315: $\geq 5 \%$ ▪ Eye Irrit. 2; H319: $\geq 5 \%$
Classification note according to Annex VI to the CLP Regulation:	2 – C
Substance with a community workplace exposure limit.	

ISOPHORONE DI-ISOCYANATE

Concentration	$0.39 \leq x < 0.5 \%$
CAS number	4098-71-9
EC number	223-861-6
INDEX number	615-008-00-5
Registration Number	01-2119490408-31-xxxx
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1; H317 ▪ Eye Irrit. 2; H319 ▪ Acute Tox. 1; H330 ▪ Resp. Sens. 1; H334 ▪ STOT SE 3; H335 ▪ Aquatic Chronic 2; H411
Specific concentration limits	▪ Resp. Sens. 1; H334: $\geq 0.5 \%$ ▪ Skin Sens. 1; H317: $\geq 0.5 \%$
Classification note according to Annex VI to the CLP Regulation:	2
LC50 (Inhalation mists/powders):	0.04 mg/l (4h)
Substance with a community workplace exposure limit.	

Dimethylbis[(1-oxoneodecyl)oxy]stannane

Concentration	$0.072 \leq x < 0.1 \%$
CAS number	68928-76-7
EC number	273-028-6
Hazard classification	▪ Acute Tox. 4; H302 ▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1A; H317 ▪ Aquatic Chronic 3; H412

The full wording of hazard (H) phrases is given in section 16 of the sheet.

Section 4

Section 4 First aid measures**4.1 Description of first aid measures**

In case of doubt or in the presence of symptoms contact a doctor and show him this document.

In case of more severe symptoms, ask for immediate medical aid.

EYES: Remove, if present, contact lenses if the situation allows you to do so easily. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. Get medical advice/attention.

SKIN: Take off contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Do not give anything by mouth to an unconscious person. Get medical advice/attention.

INHALATION: Remove victim to fresh air, away from the accident scene. In the event of respiratory symptoms (coughing, wheezing, breathing difficulty, asthma) keep the victim in a comfortable position for breathing. If necessary administer oxygen. If the subject stops breathing, administer artificial respiration. Get medical advice/attention.

Rescuers protection

It is good practice for rescuers lending support to a person who has been exposed to a chemical substance or to a mixture to wear personal protective equipment. The nature of such protection depends on the hazard level of the substance or mixture, on the type of exposure and on the extent of the contamination. In the absence of other more specific indications, use of disposable gloves in the event of possible contact with body fluids is recommended. For the type of PPE suitable for the characteristics of the substance or mixture, see section 8.

4.2 Most important symptoms and effects, both acute and delayed

Specific information on symptoms and effects caused by the product are unknown.

DELAYED EFFECTS: Based on the information currently available, there are no known cases of delayed effects following exposure to this product.

4.3 Indication of any immediate medical attention and special treatment needed

If symptoms occur, whether acute or delayed, consult a doctor.

Means to have available in the workplace for specific and immediate treatment

Running water for skin and eye wash.

Section 5 Firefighting measures**5.1 Extinguishing media****SUITABLE EXTINGUISHING EQUIPMENT**

Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.

UNSUITABLE EXTINGUISHING EQUIPMENT

Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2 Special hazards arising from the substance or mixture**HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE**

Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3 Advice for firefighters**GENERAL INFORMATION**

Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

Section 6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

Block the leakage if there is no hazard.

Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

6.2 Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3 Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.

Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4 Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

Section 7 Handling and storage

7.1 Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Vapours may catch fire and an explosion may occur; vapour accumulation is therefore to be avoided by leaving windows and doors open and ensuring good cross ventilation. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)

3 – Flammable liquids

Applicable technical instruction according to Royal Decree 656/2017:

Classification	Storage in fixed containers	Storage in mobile containers
• H225 – Flam. Liq. 2	MIE APQ-1 – Storage of flammable and combustible liquids in fixed containers	MIE APQ-10 – Storage in mobile containers

Respect the joint storage conditions established in Royal Decree 656/2017.

Store at a temperature between +10 °C and +25 °C.

7.3 Specific end use(s)

Primers, sealers and substrates.

Section 8

Section 8 Exposure controls/personal protection

8.1 Control parameters

Regulatory references

ACGIH	ACGIH 2026
European Union-OEL	Directive (EU) 2022/431; Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
Ireland-OELV	2020 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations (2001-2015) and the Safety, Health and Welfare at Work (Carcinogens) Regulations (2001-2019)
Malta-TLV	PROTECTION OF THE HEALTH AND SAFETY OF WORKERS FROM THE RISKS RELATED TO CHEMICAL AGENTS AT WORK REGULATIONS (S.L424.24). PROTECTION OF WORKERS FROM THE RISKS RELATED TO EXPOSURE TO CARCINOGENS OR MUTAGENS AT WORK REGULATIONS (S.L424.22)

DIPHENYLMETHANE-4,4'-DIISOCYANATE

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH	0.051	0.005					--
European Union-OEL	0.01		0.012				Skin As NCO
European Union-OEL	0.01		0.2				Inhalation
Ireland-OELV	0.005		0.07				-- As NCO

ETHYL METHYL KETONE

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH		75		150			Skin
European Union-OEL	600	200	900	300			--
Ireland-OELV	600	200	900	300			Skin
Malta-TLV	600	200	900	300			--

ISOPHORONE DI-ISOCYANATE

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH	0.045	0.005					--
European Union-OEL	0.01		0.02				Skin As NCO
Ireland-OELV		0.005					-- As NCO

8.2 Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.

When choosing personal protective equipment, ask your chemical substance supplier for advice.

Personal protective equipment must be CE marked, showing that it complies with applicable standards.

When choosing risk management measures and operating conditions, consult the exposure scenarios attached.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves (see standard EN 374).

The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.

The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

Protect your hands with gloves of the following type:

Section 8

Protect your hands with gloves of the following type

Material	Thickness	Breakthrough time
Nitrile rubber (NBR) In the event of a short term contact or as protection against occasional contacts	0.3 mm –	> 480 min –
Butyl rubber (IIR) In case of continued exposure	0.4 mm –	> 480 min –

SKIN PROTECTION

Wear category I professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344/EN ISO 13034).

Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required. Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS

The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid	
Colour	black	
Odour	solvent	
Odour threshold	Not applicable	
Melting point / freezing point	Not available	
Initial boiling point	80 °C (176 °F)	
Flammability	Not available	
Lower explosive limit	0.8 % (w/w)	
Upper explosive limit	11.5 % (w/w)	
Flash point	-10 °C (14 °F)	
Auto-ignition temperature	400 °C (752 °F)	
Decomposition temperature	Not available	
pH	not soluble in water	
Kinematic viscosity	Not available	
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	150 mBar	
Density and/or relative density	0.94 kg/l	
Relative vapour density	2.5	

Particle characteristics

Information not available.

Section 9

9.2 Other information

9.2.1 Information with regard to physical hazards

Information not available.

9.2.2 Other safety characteristics

VOC (Directive 2010/75/EU)	62.56 % – 588 g/l
Volatile carbon	36.61 % – 344 g/l

Section 10 Stability and reactivity

10.1 Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Decomposes at 274 °C (525.2 °F)

With water it develops carbon dioxide and forms an insoluble solid polymer and consequently any wet material recovered must be stored in open containers.

ETHYL METHYL KETONE

Reacts with: light metals, strong oxidants

Attacks various types of plastic materials

Decomposes under the effect of heat

10.2 Chemical stability

The product is stable in normal conditions of use and storage.

10.3 Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

May react dangerously with: alcohols, amines, ammonia, sodium hydroxide, acids, water, strong acids, strong bases

ETHYL METHYL KETONE

May form peroxides with: air, light, strong oxidising agents

Risk of explosion on contact with: hydrogen peroxide, nitric acid, sulphuric acid

May react dangerously with: oxidising agents, trichloromethane, alkalis

Forms explosive mixtures with: air

10.4 Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

ETHYL METHYL KETONE

Avoid exposure to: sources of heat

10.5 Incompatible materials

ETHYL METHYL KETONE

Incompatible with: strong oxidants, inorganic acids, ammonia, copper, chloroform

10.6 Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

DIPHENYLMETHANE-4,4'-DIISOCYANATE

May develop: nitric oxide, carbon oxides, hydrogen cyanide

Section 11

Section 11 Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.

It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008**11.1.1 Metabolism, toxicokinetics, mechanism of action and other information**

Information not available.

11.1.2 Information on likely routes of exposure**DIPHENYLMETHANE-4,4'-DIISOCYANATE**

WORKERS: inhalation; contact with the skin.

POPULATION: inhalation of ambient air; contact with the skin of products containing the substance.

11.1.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure**DIPHENYLMETHANE-4,4'-DIISOCYANATE**

Causes symptoms of irritation of the eye mucous membranes, upper respiratory and digestive tract and also to the skin; lung irritation of the bronchitis type (chest pains, cough, asthmatic wheezing), neurological symptoms (dizziness, balance disorders, headaches and consciousness disturbances). In severe cases, may give rise to delayed pulmonary edema (INRS, 2009). May cause hypersensitivity pneumonia which, in the event of continuous exposure, may progress to interstitial fibrosis (INRS, 2009).

11.1.4 Interactive effects**DIPHENYLMETHANE-4,4'-DIISOCYANATE**

Cross sensitisations with other isocyanates are possible, in particular with TDI (toluene diisocyanate).

11.1.5 ACUTE TOXICITY

ATE (Inhalation - mists / powders) of the mixture	> 5 mg/l
ATE (Oral) of the mixture	Not classified (no significant component)
ATE (Dermal) of the mixture	Not classified (no significant component)

DIPHENYLMETHANE-4,4'-DIISOCYANATE

LD50 (Oral):	> 2,000 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 9,400 mg/kg	Species/guidelines: Oryctolagus
LC50 (Inhalation vapours):	2.24 mg/l	Exposure duration: 4 hours Species/guidelines: Rat
ATE (Inhalation - mists / powders)	1.5 mg/l	estimate from table 3.1.2 of Annex I of the CLP

ETHYL METHYL KETONE

LD50 (Oral):	2,737 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	6,480 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	23.5 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

ISOPHORONE DI-ISOCYANATE

LC50 (Inhalation mists/powders):	0.04 mg/l	Exposure duration: 4 hours Species/guidelines: Rat
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Dimethylbis[(1-oxoneodecyl)oxy]stannane

LD50 (Oral):	892 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 2,000 mg/kg	Species/guidelines: Rat

Section 11

11.1.6 SKIN CORROSION/IRRITATION

Repeated exposure may cause skin dryness or cracking.

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation.

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Sensitising for the respiratory system

11.1.9 GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

11.1.10 CARCINOGENICITY

Does not meet the classification criteria for this hazard class

DIPHENYLMETHANE-4,4'-DIISOCYANATE

Classified in Group 3 (not classifiable as a human carcinogen) by the International Agency for Research on Cancer (IARC) - (IARC, 1999).

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

11.1.12 STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness.

11.1.13 STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

11.1.14 ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2 Information on other hazards

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with human health effects under evaluation.

Section 12 Ecological information

Use this product according to good working practices. Avoid littering. Inform the competent authorities, should the product reach waterways or contaminate soil or vegetation.

12.1 Toxicity**DIPHENYLMETHANE-4,4'-DIISOCYANATE**

LC50 - for Fish	> 1,000 mg/l	Exposure duration: 96 hours Species/guidelines: Danio rerio
Chronic NOEC for Algae / Aquatic Plants	1,640 mg/l	Species/guidelines: Desmodesmus subspicatus

Dimethylbis[(1-oxonodecyl)oxy]stannane

EC50 - for Algae / Aquatic Plants	7.6 mg/l	Exposure duration: 72 hours Species/guidelines: freshwater algae
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Section 12

12.2 Persistence and degradability**DIPHENYLMETHANE-4,4'-DIISOCYANATE**

Solubility in water	$0.1 \leq x \leq 100$ mg/l
Degradability	NOT rapidly degradable

ETHYL METHYL KETONE

Solubility in water	> 10,000 mg/l
Degradability	Rapidly degradable

ISOPHORONE DI-ISOCYANATE

Degradability	NOT rapidly degradable
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Dimethylbis[(1-oxoneodecyl)oxy]stannane

Solubility in water	16 µg/l
Degradability	NOT rapidly degradable

12.3 Bioaccumulative potential**DIPHENYLMETHANE-4,4'-DIISOCYANATE**

Partition coefficient n-octanol/water	4.51 LogKow
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ETHYL METHYL KETONE

Partition coefficient n-octanol/water	0.3 LogKow
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ISOPHORONE DI-ISOCYANATE

Partition coefficient n-octanol/water	0.99 LogKow
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Dimethylbis[(1-oxoneodecyl)oxy]stannane

Partition coefficient n-octanol/water	5.503 LogKow
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12.4 Mobility in soil

Information not available.

12.5 Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage $\geq$ than 0,1%.

12.6 Endocrine disrupting properties

Based on the available data, the product does not contain substances listed in the main European lists of potential or suspected endocrine disruptors with environmental effects under evaluation.

12.7 Other adverse effects

Information not available.

Section 13 Disposal considerations

EWC: 080409*.

13.1 Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.

Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.

Waste transportation may be subject to ADR restrictions.

The management of waste arising from the use or dispersal of this product must be organised in accordance with occupational safety regulations. See section 8 for possible need for PPE.

Section 13

CONTAMINATED PACKAGING

Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

Directive 2008/98/EC (waste)

For the disposal of waste from this material, the hazard characteristics shall be assessed in accordance with Directive 2008/98/EC. Any transboundary shipment must comply with Regulation (EU) 2024/1157.

Hazardous waste classification - Reg. (UE) 1357/2014

HP 3 – Flammable

HP 4 – Irritant — skin irritation and eye damage

HP 6 – Acute Toxicity

Section 14 Transport information**14.1 UN number or ID number**

ADR / RID	IMDG	IATA
UN 1139	UN 1139	UN 1139

14.2 UN proper shipping name

ADR / RID	COATING SOLUTION
IMDG	COATING SOLUTION
IATA	COATING SOLUTION

14.3 Transport hazard class(es)

	Class	Label	
ADR / RID	3	3	
IMDG	3	3	
IATA	3	3	

14.4 Packing group

ADR / RID	IMDG	IATA
II	II	II

14.5 Environmental hazards

ADR / RID	No	
IMDG	Not marine pollutant	
IATA	No	

14.6 Special precautions for user

ADR / RID			
Hazard identification No. - Kemler	33	Limited Quantities	5 L
Tunnel restriction code	(D/E)	Special provisions	640 C
IMDG			

Section 14

EmS	F-E, S-E	Limited Quantities	
IATA			
Maximum quantity (Cargo)	60 L	Packaging instructions (Cargo)	364
Maximum quantity (Passengers)	5 L	Packaging instructions (Passengers)	353
Special provisions	A3		

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

Section 15 Regulatory information

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

Seveso Category - Directive 2012/18/EU:

P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

	Restrictions	Registration Number EU
Product restrictions	3, 40	
Contained substance		
	74	
	75	
DIPHENYLMETHANE-4,4'-DIISOCYANATE	56, 74	01-2119457014-47-xxxx
ISOPHORONE DI-ISOCYANATE	74	01-2119490408-31-xxxx
Dimethylbis[(1-oxoneodecyl)oxy]stannane	20	

Regulation (EU) 2019/1148 - on the marketing and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

Registration Number EU

On the basis of available data, the product does not contain any SVHC in percentage $\geq$ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

Authorisation
Number

Sunset date

Registration Number EU

None

Substances subject to exportation reporting pursuant to Regulation (EU) 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Regulation (EU) 2019/1021 - on persistent organic pollutants

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

Section 15

Notification Art. 45 CLP

The mixture may not have been notified in all EU Member States. In the event of resale in a country other than the one in which it was purchased, contact the supplier to verify any applicable obligations.

Regulation (EU) 2024/590 – Substances that deplete the ozone layer

Annex I. Contains:

None

Annex II. Contains:

None

German regulation on the classification of substances hazardous to water (AwSV, vom 18. April 2017)

WGK1 – Low hazard to waters

Denmark - MAL code - Executive Order No. 301 of 13 May 1993

n.a.

Additional information according to EC Regulation no. 552/2009 of 22 June 2009:

The use of this product may cause allergic reactions in people already sensitized to diisocyanates. People with asthma, eczema or skin problems should avoid contact, including dermal contact, with this product. This product should not be used under conditions of poor ventilation, unless a protective mask with a suitable gas filter (e.g. type A1 according to EN 14387) is used.

From 24 August 2023, appropriate training is required before industrial or professional use.

15.2 Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

Section 16 Other information**Text of hazard (H) indications mentioned in section 2-3 of the sheet:**

Acute Tox. 1	Acute toxicity, category 1
Acute Tox. 4	Acute toxicity, category 4
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
Carc. 2	Carcinogenicity, category 2
Eye Irrit. 2	Eye irritation, category 2
Flam. Liq. 2	Flammable liquid, category 2
Resp. Sens. 1	Respiratory sensitization, category 1
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
STOT RE 2	Specific target organ toxicity - repeated exposure, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
EUH066	Repeated exposure may cause skin dryness or cracking.
H225	Highly flammable liquid and vapour.
H302	Harmful if swallowed.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H332	Harmful if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335	May cause respiratory irritation.
H336	May cause drowsiness or dizziness.
H351	Suspected of causing cancer.
H373	May cause damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

Section 16

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

H412	Harmful to aquatic life with long lasting effects.
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Legend

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EC50: Effective concentration (required to induce a 50% effect)
- EC: Identifier in ESIS (European archive of existing substances)
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent, bioaccumulative and toxic
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PMT: Persistent, mobile and toxic
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very persistent and very bioaccumulative
- vPvM: Very persistent and very mobile
- WGK: Water hazard classes (German).

General Bibliography

1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 2020/878 (II Annex of REACH Regulation)
4. Regulation (EC) 790/2009 (I ATP CLP) of the European Parliament
5. Regulation (EU) 286/2011 (II ATP CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III ATP CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV ATP CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V ATP CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI ATP CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII ATP CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII ATP CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX ATP CLP)
13. Regulation (EU) 2017/776 (X ATP CLP)
14. Regulation (EU) 2018/669 (XI ATP CLP)
15. Regulation (EU) 2019/521 (XII ATP CLP)
16. Delegated Regulation (UE) 2018/1480 (XIII ATP CLP)
17. Regulation (EU) 2019/1148
18. Delegated Regulation (EU) 2020/217 (XIV ATP CLP)
19. Delegated Regulation (EU) 2020/1182 (XV ATP CLP)
20. Delegated Regulation (EU) 2021/643 (XVI ATP CLP)
21. Delegated Regulation (EU) 2021/849 (XVII ATP CLP)
22. Delegated Regulation (EU) 2022/692 (XVIII ATP CLP)
23. Delegated Regulation (EU) 2023/707

Section 16

General Bibliography

- 24. Delegated Regulation (EU) 2023/1434 (XIX ATP CLP)
- 25. Delegated Regulation (EU) 2023/1435 (XX ATP CLP)
- 26. Delegated Regulation (EU) 2024/197 (XXI ATP CLP)
- 27. Delegated Regulation (EU) 2024/2564 (XXII ATP CLP)
- 28. Regulation (EU) 2024/2865
- 29. Delegated Regulation (EU) 2025/1222 (XXIII ATP CLP)

- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy

Note for users

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.

Calculation methods for classification

Chemical and physical hazards:
Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards:
Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes from the previous revision

This SDS has been prepared with a different software from the one previous revision. The new calculation does not allow us to identify all the differences compared to the previous version. We therefore recommend carefully reviewing all 16 sections of the SDS. We remain available to provide any clarification regarding the content or the changes made compared to the previous version, which is available to professional or industrial users.

Training instructions:

Workers who come into contact with dangerous substances must be informed by the employer, to the extent necessary, the effects of these substances, the manipulation methods, protection measures, first aid principles, the necessary reclamation procedures and procedures for the liquidation of faults and accidents.
Professional staff who manipulate this chemical mixture must be trained on the safety regulations and on the data shown in the safety card.

Information pursuant to EU Regulation 2020/1149 (<https://eur-lex.europa.eu/legal-content/it/txt/?uri=celex:320r1149>):

If the concentration of diisocyanate, considered individually and in a combination, is higher than or equal to 0.1 % by weight:

- The following wording must appear on the packaging, visibly separated from the other information reported on the label: "Starting from 24 August 2023, industrial or professional use is allowed only after receiving adequate training".
- The employer or the self-employed worker must ensure that industrial or professional users have completed adequate training with a positive outcome with the provisions established by the Member State in which it operates, on the safe use of the Diisocyanate before using these substances or mixes.
- The supplier must ensure that the recipient has educational materials and has access to training courses. Follow links
Training for the application sector application of polyurethane products in the construction sector - Stickers, sealants and foams applied directly by small packaging at room temperature: <https://isopa-aisbl.idloom.events/048>.
Further information: <https://www.feica.eu/our-projects/safe-use-diisocyanates>

At www.safeusediisocyanates.eu it is possible to find all the material necessary to be trained according to the legal requirements.