

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	Hybrid LM grey 7004
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1.2 Relevant identified uses of the substance or mixture and uses advised against

Intended use

Sealant with low modulus of elasticity based on hybrid polymers for facades and windows/doors.

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)
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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

Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.
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2.2 Label elements

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

Hazard pictograms

None

Signal word

None

Hazard statements

H412	Harmful to aquatic life with long lasting effects.
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Precautionary statements

P501	Dispose of contents and container in accordance with local and national regulations.
P273	Avoid release to the environment.

Section 2

Supplementary hazard statements

EUH208 Contains • trimethoxyvinylsilane. May produce an allergic reaction.

2.3 Other hazards

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%.

The product hydrolyses with formation of methanol (CAS 67-56-1). Methanol is classified in terms of both physical danger and as a health hazard.
The speed of hydrolysis and therefore also the relevance for the hazardous level of the product greatly depend on the specific conditions.

Section 3 Composition/information on ingredients

Mixture based on modified silyl polymer (SMP).

3.2 Mixtures

trimethoxyvinylsilane

Concentration	$0.5 \leq x < 1 \%$
CAS number	2768-02-7
EC number	220-449-8
INDEX number	014-049-00-0
Registration Number	01-2119513215-52-xxxx
Hazard classification	- Flam. Liq. 3; H226 - Skin Sens. 1B; H317 - Acute Tox. 4; H332

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

Concentration	$0.096 \leq x < 0.41 \%$
CAS number	52829-07-9
EC number	258-207-9
Registration Number	01-2119537297-32-xxxx
Hazard classification	- Eye Dam. 1; H318 - Aquatic Acute 1; H400 - Aquatic Chronic 2; H411
M Factor (acute)	1

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

Concentration	$0.128 \leq x < 0.25 \%$
CAS number	36443-68-2
EC number	253-039-2
Registration Number	01-2119956160-44-xxxx
Hazard classification	Aquatic Chronic 1; H410
M Factor (chronic)	10

2-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)-4-methylphenol

Concentration	$0.048 \leq x < 0.208 \%$
CAS number	3896-11-5
EC number	223-445-4
Registration Number	01-2119971796-18-xxxx

Substance with a community workplace exposure limit.
Substance vPvB

ETHYL SILICATE

Concentration	$0.0156 \leq x < 0.067 \%$
CAS number	78-10-4
EC number	201-083-8

Section 3

INDEX number	014-005-00-0
Registration Number	01-2119496195-28-xxxx
Hazard classification	- Flam. Liq. 3; H226 - Eye Irrit. 2; H319 - Acute Tox. 4; H332 - STOT SE 3; H335
Substance with a community workplace exposure limit.	

METHANOL

Concentration	$0.0012 \leq x < 0.0052 \%$
CAS number	67-56-1
EC number	200-659-6
INDEX number	603-001-00-X
Registration Number	01-2119433307-44-xxxx
Hazard classification	- Flam. Liq. 2; H225 - Acute Tox. 3; H301 - Acute Tox. 3; H311 - Acute Tox. 3; H331 - STOT SE 1; H370
Specific concentration limits	STOT SE 2; H371: $\geq 3 \%$
Substance with a community workplace exposure limit.	

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

Section 4 First aid measures

4.1 Description of first aid measures

No effects requiring implementation of special first aid measures are expected. The following information represents practical indications of correct behaviour in the event of contact with a chemical product, even if not hazardous.
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. 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.

Treat symptomatically. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

Section 5 Firefighting measures

5.1 Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

The extinguishing equipment should be of the conventional kind: carbon dioxide, foam, powder and water spray.

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2 Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE

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

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. 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. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat. Avoid leakage of the product into the environment.

7.2 Conditions for safe storage, including any incompatibilities

Store only in the original container. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and

Section 7

other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)

None

Applicable technical instruction according to Royal Decree 656/2017:

Classification	Storage in fixed containers	Storage in mobile containers
• H412 – Aquatic Chronic 3	Not applicable	MIE APQ-10 – Storage in mobile containers

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

7.3 Specific end use(s)

Information not available.

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.L.424.24). PROTECTION OF WORKERS FROM THE RISKS RELATED TO EXPOSURE TO CARCINOGENS OR MUTAGENS AT WORK REGULATIONS (S.L.424.22)

ETHYL SILICATE

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH	85	10					--
European Union-OEL	44	5					--
Ireland-OELV	44	5					--
Malta-TLV	44	5					--

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	4 mg/l
Normal value in fresh water	
Normal value for fresh water sediment	0.83 mg/kg/d
Normal value in marine water	
Normal value for marine water sediment	0.083 mg/kg/d
Normal value for the terrestrial compartment	0.05 mg/kg/d

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal		8.4 mg/kg bw/d
Consumers, short-term, inhalation	25 mg/m ³	25 mg/m ³
Consumers, long-term, dermal		8.4 mg/kg bw/d
Consumers, long-term, inhalation		25 mg/m ³
Workers, short-term, dermal		12.1 mg/kg bw/d
Workers, short-term, inhalation		85 mg/m ³
Workers, long-term, dermal		12.1 mg/kg bw/d
Workers, long-term, inhalation	85 mg/m ³	85 mg/m ³

Section 8

METHANOL

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH	262	200	328	250			Skin
European Union-OEL	260	200					Skin
European Union-OEL	260	200					--
Ireland-OELV	260	200					Skin
Malta-TLV	260	200					Skin

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	100 mg/l
Normal value in fresh water	154 mg/l
Normal value for fresh water sediment	570.4 mg/kg
Normal value in marine water	15.4 mg/l
Normal value for the terrestrial compartment	23.5 mg/kg
Normal value for water, intermittent release	1,540 mg/l

Health - Derived no-effect level - DNEL / DMEL

	Local effect	Systemic effect
Workers, short-term, dermal	Not available	40 mg/kg/d
Workers, short-term, inhalation	260 mg/m ³	260 mg/m ³
Workers, long-term, dermal	Not available	40 mg/kg/d
Workers, long-term, inhalation	260 mg/m ³	260 mg/m ³

trimethoxyvinylsilane

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	6.6 mg/l
Normal value in fresh water	0.4 mg/l
Normal value for fresh water sediment	1.5 mg/kg/d
Normal value in marine water	0.04 mg/l
Normal value for marine water sediment	0.15 mg/kg/d
Normal value for the terrestrial compartment	0.06 mg/kg/d
Normal value for water, intermittent release	2.4 mg/l

Health - Derived no-effect level - DNEL / DMEL

	Local effect	Systemic effect
Consumers, long-term, dermal		7.8 mg/kg bw/d
Consumers, long-term, inhalation		18.9 mg/m ³
Consumers, long-term, oral		0.3 mg/kg bw/d
Workers, long-term, dermal		3.9 mg/kg bw/d
Workers, long-term, inhalation		27.6 mg/m ³

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	1 mg/l
Normal value in fresh water	0.0188 mg/l
Normal value for fresh water sediment	29 mg/kg/d
Normal value in marine water	0.0018 mg/l
Normal value for marine water sediment	2.9 mg/kg/d
Normal value for the terrestrial compartment	5.9 mg/kg/d

Health - Derived no-effect level - DNEL / DMEL

	Local effect	Systemic effect
Consumers, long-term, dermal		
Consumers, long-term, inhalation		170 µg/m ³

Section 8

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Workers, long-term, dermal		
Workers, long-term, inhalation		680 µg/m ³
Workers, long-term, oral		

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

Predicted no-effect concentration - PNEC	
Normal value in fresh water	0.001 mg/l
Normal value for fresh water sediment	0.195 mg/kg/d
Normal value for marine water sediment	0.019 mg/kg/d

2-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)-4-methylphenol

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
European Union-OEL	3						Respiratory

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.

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:

Protect your hands with gloves of the following type

Material	Thickness	Breakthrough time
Butyl rubber (IIR)	0.9 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.

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, wear a mask with a type AX filter, whose limit of use will be defined by the manufacturer (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.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

Section 9

Section 9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	pasty liquid	
Colour	grey	
Odour	mild	
Odour threshold	Not applicable	
Melting point / freezing point	Not available	
Initial boiling point	> 35 °C (> 95 °F)	
Flammability	Not applicable	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	> 60 °C (> 140 °F)	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	not soluble in water	
Kinematic viscosity	> 20.5 mm ² /s	Temperature: 40 °C (104 °F)
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not available	
Density and/or relative density	1.5 g/cm ³	Temperature: 23 °C (73.4 °F)
Relative vapour density	Not available	

Particle characteristics

Information not available.

9.2 Other information

9.2.1 Information with regard to physical hazards

Information not available.

9.2.2 Other safety characteristics

Total solids	97.98 %	Temperature: 250 °C (482 °F)
VOC (Directive 2010/75/EU)	1.03 % – 15 g/l	
Kinematic viscosity (40 °C)	>0.5 m ² /s	

Section 10 Stability and reactivity

10.1 Reactivity

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

Product cures with moisture.

10.2 Chemical stability

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

10.3 Possibility of hazardous reactions

No hazardous reactions are foreseeable in normal conditions of use and storage.

Section 10

10.4 Conditions to avoid

None in particular. However the usual precautions used for chemical products should be respected.

10.5 Incompatible materials

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

Incompatible with: strong acids, strong bases

2-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)-4-methylphenol

Incompatible with: strong acids, strong bases

10.6 Hazardous decomposition products

None under normal use conditions. Small amounts of methanol (CAS 67-56-1) are formed by hydrolysis and released upon curing.

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

METHANOL

WORKERS: inhalation; contact with the skin.

POPULATION: ingestion of contaminated food or water; 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

METHANOL

The minimum lethal dose for humans by ingestion is considered to be in the range from 300 to 1000 mg/kg. Ingestion of 4-10 ml of the substance may cause permanent blindness in adult humans (IPCS).

11.1.4 Interactive effects

Information not available.

11.1.5 ACUTE TOXICITY

ETHYL SILICATE

LD50 (Oral):	> 2,500 mg/kg	Species/guidelines: Rat
LC50 (Inhalation mists/powders):	> 10 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

METHANOL

LC50 (Inhalation vapours):	> 87.6 mg/l	Exposure duration: 4 hours Species/guidelines: Rat
ATE (Oral)	100 mg/kg	estimate from table 3.1.2 of Annex I of the CLP
ATE (Dermal)	300 mg/kg	estimate from table 3.1.2 of Annex I of the CLP
ATE (Inhalation - vapours)	3 mg/l	estimate from table 3.1.2 of Annex I of the CLP

Section 11

trimethoxyvinylsilane

LD50 (Oral):	6,899 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	3,158 mg/kg	Species/guidelines: Rabbit
LC50 (Inhalation vapours):	2,773	Exposure duration: 4 hours Species/guidelines: Rat
ATE (Inhalation - vapours)	11 mg/l	estimate from table 3.1.2 of Annex I of the CLP

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

LD50 (Oral):	3,700 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 2,000 mg/kg	Species/guidelines: Rat
LC50 (Inhalation vapours):	500 mg/m ³	Exposure duration: 4 hours Species/guidelines: Rat

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

LD50 (Oral):	> 7,000 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	> 2,000 mg/kg	Species/guidelines: Rat

2-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)-4-methylphenol

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

11.1.6 SKIN CORROSION/IRRITATION

Does not meet the classification criteria for this hazard class

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Does not meet the classification criteria for this hazard class

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Does not meet the classification criteria for this hazard class

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

Based on the information provided by our suppliers, the total concentration of titanium dioxide with an aerodynamic diameter of 10 µm can be given as < 600 ppmw. However, the product is not a powder mixture, but a pasty suspension in the fresh state and an elastomeric monolithic solid in the polymerised state, which as such is not covered by EU Regulation 2020/217.

However, our laboratory has performed artificial UV ageing and subsequent tensile tests on polymerised product samples without finding any signs of deterioration or evidence that the product releases TiO₂ particles over time.

11.1.11 REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

11.1.12 STOT - SINGLE EXPOSURE

Does not meet the classification criteria for this hazard class

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

Section 11

Viscosity:

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

ETHYL SILICATE

EC50 - for Crustacea	> 75 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	> 245 mg/l	Exposure duration: 96 hours Species/guidelines: Danio rerio
EC50 - for Algae / Aquatic Plants	> 22 mg/l	Exposure duration: 72 hours Species/guidelines: Pseudokirchneriella subcapitata
Chronic NOEC for Crustacea	75 mg/l	Species/guidelines: Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	22 mg/l	Species/guidelines: Pseudokirchneriella subcapitata

METHANOL

EC50 - for Crustacea	> 10,000 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	15,400 mg/l	Exposure duration: 96 hours Species/guidelines: Lepomis macrochirus

trimethoxyvinylsilane

EC50 - for Crustacea	168.7 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	191 mg/l	Exposure duration: 96 hours Species/guidelines: Oncorhynchus mykiss
EC50 - for Algae / Aquatic Plants	89 mg/l	Exposure duration: 72 hours Species/guidelines: Selenestrum capricornutum
Chronic NOEC for Fish	100 mg/l	Species/guidelines: Oncorhynchus mykiss
Chronic NOEC for Crustacea	28 mg/l	Species/guidelines: Daphnia magna

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

EC50 - for Crustacea	8.6 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	4.4 mg/l	Exposure duration: 96 hours Species/guidelines: Lepomis macrochirus
EC50 - for Algae / Aquatic Plants	0.705 mg/l	Exposure duration: 72 hours Species/guidelines: Pseudokirchneriella subcapitata

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

EC50 - for Crustacea	> 100 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	43 mg/l	Exposure duration: 96 hours Species/guidelines: Lepomis macrochirus
EC50 - for Algae / Aquatic Plants	> 100 mg/l	Exposure duration: 72 hours Species/guidelines: Scenedesmus subspicatus

Section 12

2-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)-4-methylphenol

EC50 - for Crustacea	> 100 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	> 100 mg/l	Exposure duration: 96 hours Species/guidelines: Brachydanio rerio
EC50 - for Algae / Aquatic Plants	> 100 mg/l	Exposure duration: 72 hours Species/guidelines: Scenedesmus sp.
Chronic NOEC for Algae / Aquatic Plants	100 mg/l	Species/guidelines: Scenedesmus so.

12.2 Persistence and degradability

ETHYL SILICATE

Solubility in water	$1,000 \leq x \leq 10,000$ mg/l
Degradability	Rapidly degradable

METHANOL

Solubility in water	$1,000 \leq x \leq 10,000$ mg/l
Degradability	Rapidly degradable

trimethoxyvinylsilane

Degradability	NOT rapidly degradable
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Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

Solubility in water	18.8 mg/l
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Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

Solubility in water	104 µg/l
Degradability	NOT rapidly degradable

12.3 Bioaccumulative potential

ETHYL SILICATE

Bioconcentration factor	3.16
Partition coefficient n-octanol/water	3.18 LogKow

METHANOL

Bioconcentration factor	0.2
Partition coefficient n-octanol/water	-0.77 LogKow

Bis(2,2,6,6-tetramethyl-4-piperidyl) sebacate

Bioconcentration factor	0.35
Partition coefficient n-octanol/water	0.35 LogKow

Ethylenebis(oxyethylene) bis[3-(5-tert-butyl-4-hydroxy-m-tolyl)propionate]

Bioconcentration factor	12
Partition coefficient n-octanol/water	4.7 LogKow

2-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)-4-methylphenol

Bioconcentration factor	7,075
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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%.

Section 12

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: 080410.

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.

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.

CONTAMINATED PACKAGING

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

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

None

Section 14 Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and by Rail (RID), of the International Maritime Dangerous Goods Code (IMDG), and of the International Air Transport Association (IATA) regulations.

14.1 UN number or ID number

Not applicable

14.2 UN proper shipping name

Not applicable

14.3 Transport hazard class(es)

Not applicable

14.4 Packing group

Not applicable

14.5 Environmental hazards

Not applicable

14.6 Special precautions for user

Not applicable

14.7 Maritime transport in bulk according to IMO instruments

Not applicable

Section 15

Section 15 Regulatory information

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

Seveso Category - Directive 2012/18/EU:

None

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		
	75	
DIISONONYL PHTHALATE	52	01-2119430798-28-xxxx
Dioctyltin oxide	20	01-2119971268-27-xxxx

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

Not applicable

Substances in Candidate List (Art. 59 REACH)

2-tert-butyl-6-(5-chloro-2H-1,2,3-benzotriazol-2-yl)-4-methylphenol

Registration Number EU

01-2119971796-18-xxxx

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

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

WGK1 – Low hazard to waters

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. 3	Acute toxicity, category 3
Acute Tox. 4	Acute toxicity, category 4
Aquatic Acute 1	Hazardous to the aquatic environment, acute toxicity, category 1
Aquatic Chronic 1	Hazardous to the aquatic environment, chronic toxicity, category 1
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2

Section 16

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

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Skin Sens. 1B	Skin sensitization, category 1B
STOT SE 1	Specific target organ toxicity - single exposure, category 1
STOT SE 2	Specific target organ toxicity - single exposure, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H331	Toxic if inhaled.
H332	Harmful if inhaled.
H335	May cause respiratory irritation.
H370	Causes damage to organs.
H371	May cause damage to organs.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.

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).

Section 16

General Bibliography

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
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 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.

Section 16

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.