

Safety Data Sheet

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

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

1.1 Product identifier

Item code	1102005106 A
Product name	OMNIX comp. A
UFI	6TX0-K07P-C00G-6MVN

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

Intended use
Epoxy-polyurethane adhesive for gluing tiles, component A

Identified uses
BUILDING – Professional uses

Product to be mixed with component B.

Product for craft use.

Any other use is not recommended.

1.3 Details of the supplier of the safety data sheet

Company name	FORNACI CALCE GRIGOLIN S.P.A.
Full address	Via Foscarini, 2
Town	Nervesa della Battaglia
Postal code	31040
Province	TV
Country	Italy
Phone number	+39 0422 5261
Fax	+39 0422 526299
e-mail address of the competent person responsible for the Safety Data Sheet	info@fornacigrigolin.it

Importer in Switzerland:

Grigolin SA

Corso Elvezia, 23 - 6900 Lugano (CH)

Tel: +41 91 922 87 06

1.4 Emergency telephone number

For urgent inquiries refer to	MALTA - Malta National Poisons Centre Tel. 1774 every day, from 8:00 a.m. to 8:00 p.m. Tel. +356 2559 4600 (abroad)
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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		
Skin irritation, category 2	H315	Causes skin irritation.

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Section 2

Hazard classification		
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Eye irritation, category 2	H319	Causes serious eye irritation.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.
Very persistent and very bioaccumulative	EUH441	Strongly accumulates in the environment and living organisms including in humans.

2.2 Label elements

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

Hazard pictograms



Signal word

Danger

Hazard statements

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H412	Harmful to aquatic life with long lasting effects.
EUH441	Strongly accumulates in the environment and living organisms including in humans.

Precautionary statements

P261	Avoid breathing fume, gas, vapours, spray.
P202	Do not handle until all safety precautions have been read and understood.
P201	Obtain special instructions before use.
P280	Wear protective gloves / eye protection / face protection.
P333+P313	If skin irritation or rash occurs: Get medical advice / attention.
P337+P313	If eye irritation persists: Get medical advice / attention.

Supplementary hazard statements

EUH205	Contains epoxy constituents. May produce an allergic reaction.
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Contains

2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

2-ETHYLHEXILGLYCIDYLETHER

Cashew nut shell extract, decarboxylated, distilled

2.3 Other hazards

PBT substances contained

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

vPvB substances contained

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

Section 2

The product does not contain substances with endocrine disrupting properties in concentration $\geq 0.1\%$.

3 Composition/information on ingredients

3.2 Mixtures

2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE

Concentration	$5.4 \leq x < 8.4 \%$
CAS number	1675-54-3
EC number	216-823-5
INDEX number	603-073-00-2
Registration Number	01-2119456619-26
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1; H317 ▪ Eye Irrit. 2; H319 ▪ Aquatic Chronic 2; H411
Specific concentration limits	▪ Skin Irrit. 2; H315: $\geq 5 \%$ ▪ Eye Irrit. 2; H319: $\geq 5 \%$

TITANIUM DIOXIDE [in powder containing $\geq 1\%$ of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Concentration	$1.8 \leq x < 2.8 \%$
CAS number	13463-67-7
EC number	236-675-5
INDEX number	022-006-00-2
Registration Number	01-2119489379-17
Hazard classification	▪ Carc. 2; H351
Classification note according to Annex VI to the CLP Regulation:	10 – V – W

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

Concentration	$1.35 \leq x < 2.1 \%$
EC number	700-960-7
Registration Number	01-2119555274-38-XXXX
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1B; H317 ▪ Aquatic Chronic 3; H412 ▪ vPvB; EUH441
Substance PBT	
Substance vPvB	

2-ETHYLHEXILGLYCIDYLETHER

Concentration	$1.35 \leq x < 2.1 \%$
CAS number	2461-15-6
EC number	219-553-6
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1A; H317

Cashew nut shell extract, decarboxylated, distilled

Concentration	$0.9 \leq x < 1.4 \%$
CAS number	8007-24-7
EC number	232-355-4

Section 3

Hazard classification	▪ Acute Tox. 4; H302 ▪ Acute Tox. 4; H312 ▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1A; H317 ▪ Eye Dam. 1; H318
LD50 (Oral):	500 mg/kg
LD50 (Dermal):	1,100 mg/kg

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

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 immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. 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 skin irritation or rash occurs: Get medical advice / attention.

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

Running water for skin and eye wash.

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.

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Section 5

5.2 Special hazards arising from the substance or mixture

DANGERS DUE TO EXPOSURE IN THE EVENT OF FIRE

Avoid breathing combustion products such as carbon dioxide (CO₂), nitrogen oxides (NO_x), sulfur dioxide (SO₂) for complete combustion; carbon monoxide (CO), benzene, toluene, formaldehyde, PAH, soot, HCN due to incomplete combustion.

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).

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For those not directly involved:

Alert the personnel responsible for managing such emergencies. Move away from the accident area if you do not have the personal protective equipment listed in section 8.

For those directly involved:

Remove all personnel who are not adequately equipped to deal with the emergency.

Wear adequate personal protective equipment referred to in section 8, to prevent contamination of the skin, eyes and personal clothing. Stop the leak if there is no danger.

Make the area affected by the accident accessible to workers only after adequate remediation has taken place. Ventilate the rooms affected by the accident.

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.

7 Handling and storage

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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. Keep containers away from any incompatible materials, see section 10 for details.

Section 7

Storage class TRGS 510 (Germany)

None

Storage Class (Switzerland): 13 - Non-combustible solids

7.3 Specific end use(s)

Information not available.

8 Exposure controls/personal protection

8.1 Control parameters

Regulatory references

ACGIH ACGIH 2025

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)

2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	10 mg/l
Normal value in fresh water	0.006 mg/l
Normal value for fresh water sediment	0.341 mg/kg
Normal value in marine water	0.0006 mg/l
Normal value for marine water sediment	0.0341 mg/kg
Normal value for the terrestrial compartment	0.065 mg/kg
Normal value for the food chain (secondary poisoning)	11 mg/kg
Normal value for fresh water, intermittent release	0.018 mg/l
Normal value for marine water, intermittent release	0.0018 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal		3.571 mg/kg bw/d
Consumers, short-term, oral		0.75 mg/kg bw/d
Consumers, long-term, dermal		0.0893 mg/kg bw/d
Consumers, long-term, inhalation		0.87 mg/m ³
Workers, long-term, dermal		0.75 mg/kg bw/d
Workers, long-term, inhalation		4.93 mg/m ³

TITANIUM DIOXIDE [in powder containing ≥ 1% of particles with aerodynamic diameter ≤ 10 µm]

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH	0.2						Respiratory
Ireland-OELV	4						Respiratory
Ireland-OELV	10						Inhalation
Ireland-OELV	4						--

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, inhalation	0.21 mg/kg	
Workers, long-term, inhalation	1.25 mg/kg	

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

Predicted no-effect concentration - PNEC

Normal value of STP microorganisms	10 mg/l
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Section 8

Predicted no-effect concentration - PNEC	
Normal value in fresh water	0.6 mg/l
Normal value for fresh water sediment	45,602 mg/kg
Normal value in marine water	0.06 mg/l
Normal value for marine water sediment	4,506 mg/kg
Normal value for the terrestrial compartment	9,091 mg/kg

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, dermal		1.67 mg/kg bw/d
Consumers, long-term, inhalation		0.348 mg/kg
Consumers, long-term, oral		0.2 mg/kg bw/d
Workers, long-term, dermal		3.5 mg/kg bw/d
Workers, long-term, inhalation		1.4 mg/m ³

2-ETHYLHEXILGLYCIDYLETHER

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	10 mg/l
Normal value in fresh water	0.007 mg/l
Normal value for fresh water sediment	286.66 mg/kg
Normal value in marine water	0.00072 mg/l
Normal value for marine water sediment	28.66 mg/kg
Normal value for the terrestrial compartment	57.16 mg/kg

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal	500 mg/kg bw/d	500 mg/kg bw/d
Consumers, long-term, dermal	2.5 mg/kg bw/d	2.5 mg/kg bw/d
Workers, short-term, dermal		1 mg/kg bw/d
Workers, long-term, dermal		4.17 mg/kg bw/d

Cashew nut shell extract, decarboxylated, distilled

Predicted no-effect concentration - PNEC	
Normal value in fresh water	0.0114 mg/l
Normal value for fresh water sediment	5 mg/kg
Normal value in marine water	0.00114 mg/l
Normal value for marine water sediment	0.5 mg/kg

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, dermal		0.75 mg/kg/d
Consumers, long-term, inhalation		1.31 mg/m ³
Consumers, long-term, oral		0.75 mg/kg/d
Workers, long-term, dermal		2.1 mg/kg/d
Workers, long-term, inhalation		7.4 mg/m ³

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.

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Section 8

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
Neoprene	≥ 0.5 mm	≥ 480 min
–	–	–
Nitrile rubber (NBR)	≥ 0.35 mm	≥ 480 min
–	–	–
Butyl rubber (IIR)	0.5 mm	≥ 480 min
–	–	–
Viton or fluoroelastomer (FKM)	0.4 mm	≥ 480 min
–	–	–

SKIN PROTECTION

Wear category II 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, 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.

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

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	paste	
Colour	beige	
Odour	Sweet	
Melting point / freezing point	Not available	Remarks: not relevant due to the nature of the product, they do not provide proprietary information on its dangerousness
Initial boiling point	> 35 °C (> 95 °F)	Remarks: data not applicable
Flammability	not flammable	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	> 60 °C (> 140 °F)	

Section 9

Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	Substance/mixture is non-soluble (in water)	
Kinematic viscosity	$2,368,000 \leq x \leq 2,895,000 \text{ mm}^2/\text{s}$	Temperature: 20 °C (68 °F)
Dynamic viscosity	$4,500,000 \leq x \leq 5,500,000 \text{ mPa}\cdot\text{s}$	Temperature: 20 °C (68 °F)
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	Not applicable	Remarks: not relevant due to the nature of the product, they do not provide proprietary information on its dangerousness
Density and/or relative density	$1.8 \leq x \leq 2 \text{ kg/l}$	Temperature: 20 °C (68 °F)
Relative vapour density	Not applicable	Remarks: not relevant due to the nature of the product, they do not provide proprietary information on its dangerousness

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

Explosive properties	Not applicable	Remarks: absence of functional groups associated with explosive properties
Oxidising properties	Not applicable	Remarks: absence of functional groups associated with oxidizing properties
VOC (Directive 2010/75/EU)	1.1556 % – 20.8 g/l	
Volatile carbon	0 % – 0 g/l	

10 Stability and reactivity
10.1 Reactivity

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

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.

10.4 Conditions to avoid

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

10.5 Incompatible materials

Information not available.

Section 10

10.6 Hazardous decomposition products

Information not available.

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

Information not available.

11.1.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available.

11.1.4 Interactive effects

Information not available.

11.1.5 ACUTE TOXICITY

ATE (Inhalation) of the mixture	Not classified (no significant component)
ATE (Oral) of the mixture	> 2,000 mg/kg
ATE (Dermal) of the mixture	> 2,000 mg/kg

2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE

LD50 (Oral):	15,000 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	23,000 mg/kg	Species/guidelines: Rabbit

TITANIUM DIOXIDE [in powder containing $\geq 1\%$ of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

LD50 (Oral):	> 2,000 mg/kg	Species/guidelines: Rat
LC50 (Inhalation mists/powders):	> 6.82 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

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

LD50 (Oral):	> 7,800 mg/kg	Species/guidelines: Rat
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Cashew nut shell extract, decarboxylated, distilled

LD50 (Oral):	500 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	1,100 mg/kg	Species/guidelines: Rat
LC50 (Inhalation vapours):	> 20 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

Section 11

11.1.6 SKIN CORROSION/IRRITATION

Causes skin irritation.

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation.

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

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

TITANIUM DIOXIDE [in powder containing $\geq 1\%$ of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1% or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$.

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

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.

12 Ecological information

The product is considered dangerous for the environment and is harmful to aquatic organisms with long-term negative effects on the aquatic environment.

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**2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE**

EC50 - for Crustacea	1.8 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	2 mg/l	Exposure duration: 96 hours Species/guidelines: Oncorhynchus mykiss

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EC50 - for Algae / Aquatic Plants	11 mg/l	Exposure duration: 72 hours
Chronic NOEC for Crustacea	0.3 mg/l	Species/guidelines: Daphnia magna
Chronic NOEC for Algae / Aquatic Plants	4.2 mg/l	

TITANIUM DIOXIDE [in powder containing $\geq$ 1% of particles with aerodynamic diameter $\leq$ 10 μ m]

EC50 - for Crustacea	> 100 mg/l	Exposure duration: 48 hours
EC50 - for Algae / Aquatic Plants	100 mg/l	Exposure duration: 72 hours
Chronic NOEC for Algae / Aquatic Plants	> 5,600 mg/l	

12.2 Persistence and degradability
2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE

Solubility in water	6.9 mg/l	
Degradability	NOT rapidly degradable	

TITANIUM DIOXIDE [in powder containing $\geq$ 1% of particles with aerodynamic diameter $\leq$ 10 μ m]

Solubility in water	< 0.001 mg/l	
Degradability	NOT rapidly degradable	

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

Solubility in water	4 mg/l	
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12.3 Bioaccumulative potential
2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE

Bioconcentration factor	31	
Partition coefficient n-octanol/water	3.242 LogKow	

12.4 Mobility in soil
2,2-BIS-[4- (2,3-EPOXYPROPOXY)PHENYL]-PROPANE

Partition coefficient soil/water	2.65 LogKoc	
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Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

Partition coefficient soil/water	3.6 LogKoc	
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12.5 Results of PBT and vPvB assessment

It accumulates significantly in the environment and in living organisms, including humans.

PBT substances contained	
Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol	

vPvB substances contained	
Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol	

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.

13 Disposal considerations

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

HP 7 – Carcinogenic

HP 14 – Ecotoxic

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

15 Regulatory information

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

Seveso Category - Directive 2012/18/EU:

None

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Section 15

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

	Restrictions	Registration Number EU
Product restrictions	3	
Contained substance		
	75	

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

Not applicable

Substances in Candidate List (Art. 59 REACH)

Registration Number EU

Reaction products of oligomerization and alkylation of 2-phenylpropene and phenol

01-2119555274-38-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

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.

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

None

15.2 Chemical safety assessment

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

16 Other information

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

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 Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
Skin Sens. 1B	Skin sensitization, category 1B

Section 16

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

vPvB	Very persistent and very bioaccumulative
EUH441	Strongly accumulates in the environment and living organisms including in humans.
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful 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).

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

Section 16

General Bibliography

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
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.

Safety Data Sheet

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

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

1.1 Product identifier

Item code	1102005106 B
Product name	OMNIX comp. B
UFI	NVX0-20X2-N00Y-VYFQ

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

Intended use
Hardener (comp. B) for component A of OMNIX

Identified uses
BUILDING – Professional uses

Product to be mixed with component A.

Product for craft use.

Any other use is not recommended.

1.3 Details of the supplier of the safety data sheet

Company name	FORNACI CALCE GRIGOLIN S.P.A.
Full address	Via Foscarini, 2
Town	Nervesa della Battaglia
Postal code	31040
Province	TV
Country	Italy
Phone number	+39 0422 5261
Fax	+39 0422 526299
e-mail address of the competent person responsible for the Safety Data Sheet	info@fornacigrigolin.it

Importer in Switzerland:

Grigolin SA

Corso Elvezia, 23 - 6900 Lugano (CH)

Tel: +41 91 922 87 06

1.4 Emergency telephone number

For urgent inquiries refer to	MALTA - Malta National Poisons Centre Tel. 1774 every day, from 8:00 a.m. to 8:00 p.m. Tel. +356 2559 4600 (abroad)
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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		
Skin corrosion, category 1B	H314	Causes severe skin burns and eye damage.

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			First emission
			EN - English

Section 2

Hazard classification		
Skin sensitization, category 1	H317	May cause an allergic skin reaction.
Serious eye damage, category 1	H318	Causes serious eye damage.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2 Label elements

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

Hazard pictograms



Signal word

Danger

Hazard statements

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H412	Harmful to aquatic life with long lasting effects.

Precautionary statements

P310	Immediately call a poison center/doctor.
P260	Do not breathe fume, gas, vapours, spray.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303+P361+P353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/ shower.
P280	Wear protective gloves / protective clothing / eye protection / face protection.
P264	Wash with soap and water thoroughly after handling.

Contains

Reaction product of fatty, C18 alkyl acids with amines, polyethylene-polytetraethylenepentamine fraction
 FATTY ACIDS, C18-INSATUERS, DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENTETRAMINE
 2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL
 AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION
 3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

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%.

3 Composition/information on ingredients

3.2 Mixtures

Reaction product of fatty, C18 alkyl acids with amines, polyethylene-polytetraethylenepentamine fraction

Concentration	$15 \leq x < 25 \%$
EC number	701-046-0
Registration Number	01-2119972321-42-XXXX

Section 3

Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1A; H317 ▪ Eye Dam. 1; H318 ▪ Aquatic Chronic 2; H411
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FATTY ACIDS, C18-INSATURES, DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENTETRAMINE

Concentration	$10.8 \leq x < 16.8 \%$
CAS number	68082-29-1
EC number	500-191-5
Registration Number	01-2119972320-44
Hazard classification	▪ Skin Irrit. 2; H315 ▪ Skin Sens. 1A; H317 ▪ Eye Irrit. 2; H319

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Concentration	$7.2 \leq x < 11.2 \%$
CAS number	90-72-2
EC number	202-013-9
INDEX number	603-069-00-0
Registration Number	01-2119560597-27-XXXX
Hazard classification	▪ Acute Tox. 4; H302 ▪ Skin Corr. 1C; H314 ▪ Eye Dam. 1; H318
LD50 (Oral):	500 mg/kg

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

Concentration	$2.7 \leq x < 4.2 \%$
CAS number	90640-67-8
EC number	292-588-2
INDEX number	612-065-00-8
Registration Number	01-2119487919-13-XXXX
Hazard classification	▪ Acute Tox. 4; H302 ▪ Acute Tox. 4; H312 ▪ Skin Corr. 1B; H314 ▪ Skin Sens. 1; H317 ▪ Eye Dam. 1; H318 ▪ Aquatic Chronic 3; H412
LD50 (Oral):	1,716 mg/kg
LD50 (Dermal):	1,465 mg/kg

3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Concentration	$2.7 \leq x < 4.2 \%$
CAS number	2855-13-2
EC number	220-666-8
INDEX number	612-067-00-9
Registration Number	01-2119514687-32
Hazard classification	▪ Acute Tox. 4; H302 ▪ Skin Corr. 1B; H314 ▪ Skin Sens. 1A; H317 ▪ Eye Dam. 1; H318
Specific concentration limits	▪ Skin Sens. 1A; H317: $\geq 0.001 \%$
LD50 (Oral):	1,030 mg/kg

Section 3

TITANIUM DIOXIDE [in powder containing $\geq 1\%$ of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Concentration	$1.35 \leq x < 2.1 \%$
CAS number	13463-67-7
EC number	236-675-5
INDEX number	022-006-00-2
Registration Number	01-2119489379-17
Hazard classification	▪ Carc. 2; H351
Classification note according to Annex VI to the CLP Regulation:	10 – V – W

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

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 immediately all contaminated clothing. Wash immediately and thoroughly with running water (and soap if possible). Get medical advice/attention. Avoid further contact with contaminated clothing.

INGESTION: Do not induce vomiting unless explicitly authorised by a doctor. Rinse your mouth with running water. 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

Immediately call a poison center/doctor.

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

Running water for skin and eye wash.

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

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Section 5

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).

6 Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

For those not directly involved:

Alert the personnel responsible for managing such emergencies. Move away from the accident area if you do not have the personal protective equipment listed in section 8.

For those directly involved:

Remove all personnel who are not adequately equipped to deal with the emergency.

Wear adequate personal protective equipment referred to in section 8, to prevent contamination of the skin, eyes and personal clothing. Stop the leak if there is no danger.

Make the area affected by the accident accessible to workers only after adequate remediation has taken place. Ventilate the rooms affected by the accident.

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.

7 Handling and storage

7.1 Precautions for safe handling

Before handling the product, consult all the other sections of this material safety data sheet. Avoid leakage of the product into the environment. Do not eat, drink or smoke during use. Remove any contaminated clothes and personal protective equipment before entering places in which people eat.

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. Keep containers

Section 7

away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany)

None

Storage Class (Switzerland): 13 - Non-combustible solids

7.3 Specific end use(s)

Information not available.

8 Exposure controls/personal protection

8.1 Control parameters

Regulatory references	
ACGIH	ACGIH 2025
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)

FATTY ACIDS, C18-INSATURES, DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENTETRAMINE

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	3.84 mg/l
Normal value in fresh water	0.00434 mg/l
Normal value for fresh water sediment	434.02 mg/kg
Normal value in marine water	0.000434 mg/l
Normal value for marine water sediment	43.4 mg/kg
Normal value for the terrestrial compartment	86.78 mg/kg
Normal value for water, intermittent release	0.0434 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, dermal		0.0972 mg/kg bw/d
Consumers, long-term, inhalation		0.169 mg/m ³
Consumers, long-term, oral		0.0972 mg/kg bw/d
Workers, long-term, dermal		0.272 mg/kg bw/d
Workers, long-term, inhalation		0.952 mg/m ³

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	4.25 mg/l
Normal value in fresh water	0.19 mg/l
Normal value for fresh water sediment	95.5 mg/kg
Normal value in marine water	0.038 mg/l
Normal value for marine water sediment	19.2 mg/kg
Normal value for the terrestrial compartment	19.1 mg/kg
Normal value for the food chain (secondary poisoning)	0.18 mg/kg
Normal value for water, intermittent release	0.2 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal	1 mg/cm ²	8 mg/kg bw/d
Consumers, short-term, inhalation		0.29 mg/m ³
Consumers, short-term, oral		20 mg/kg bw/d
Consumers, long-term, dermal	0.43 mg/cm ²	0.25 mg/kg bw/d

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Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, oral		0.41 mg/kg bw/d
Workers, long-term, dermal	0.028 mg/cm ²	0.57 mg/kg bw/d
Workers, long-term, inhalation		1 mg/m ³

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	0.2 mg/l
Normal value in fresh water	0.046 mg/l
Normal value for fresh water sediment	0.2621 mg/kg
Normal value in marine water	0.0046 mg/l
Normal value for marine water sediment	0.0262 mg/kg
Normal value for the terrestrial compartment	0.025 mg/kg
Normal value for water, intermittent release	0.46 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal		0.075 mg/kg bw/d
Consumers, short-term, inhalation		0.13 mg/kg
Consumers, long-term, dermal		0.075 mg/kg bw/d
Consumers, long-term, inhalation		0.13 mg/kg
Consumers, long-term, oral		0.075 mg/kg bw/d
Workers, short-term, dermal		0.6 mg/kg bw/d
Workers, short-term, inhalation		2.1 mg/m ³
Workers, long-term, dermal		0.15 mg/kg bw/d
Workers, long-term, inhalation		0.53 mg/m ³

3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	3.18 mg/l
Normal value in fresh water	0.06 mg/l
Normal value for fresh water sediment	5.784 mg/kg
Normal value in marine water	0.006 mg/l
Normal value for marine water sediment	0.578 mg/kg
Normal value for the terrestrial compartment	1.121 mg/kg
Normal value for water, intermittent release	0.23 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal	Not available	No hazard identified
Consumers, short-term, inhalation	Not available	No hazard identified
Consumers, short-term, oral		Not available
Consumers, long-term, dermal	Not available	No hazard identified
Consumers, long-term, inhalation	Not available	No hazard identified
Consumers, long-term, oral		0.526 mg/kg bw/d
Workers, short-term, dermal		No hazard identified
Workers, short-term, inhalation	0.073 mg/m ³	No hazard identified
Workers, long-term, dermal		No hazard identified
Workers, long-term, inhalation	0.073 mg/m ³	No hazard identified

TITANIUM DIOXIDE [in powder containing ≥ 1% of particles with aerodynamic diameter ≤ 10 µm]

Section 8

	TWA		STEL		CEILING		Remarks
	mg/m ³	ppm	mg/m ³	ppm	mg/m ³	ppm	
ACGIH	0.2						Respiratory
Ireland-OELV	4						Respiratory
Ireland-OELV	10						Inhalation
Ireland-OELV	4						--

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, long-term, inhalation	0.21 mg/kg	
Workers, long-term, inhalation	1.25 mg/kg	

Reaction product of fatty, C18 alkyl acids with amines, polyethylene-polytetraethylenepentamine fraction

Predicted no-effect concentration - PNEC	
Normal value of STP microorganisms	7.21 mg/l
Normal value in fresh water	0.00263 mg/l
Normal value for fresh water sediment	263.01 mg/kg/d
Normal value in marine water	0.000263 mg/l
Normal value for marine water sediment	26.301 mg/kg/d
Normal value for the terrestrial compartment	52.58 mg/kg
Normal value for fresh water, intermittent release	0.0263 mg/l

Health - Derived no-effect level - DNEL / DMEL	Local effect	Systemic effect
Consumers, short-term, dermal	Not available	No hazard identified
Consumers, short-term, oral		No hazard identified
Consumers, long-term, dermal	Not available	0.56 mg/kg bw/d
Consumers, long-term, inhalation		0.97 mg/m ³
Consumers, long-term, oral		0.56 mg/kg bw/d
Workers, short-term, dermal	Not available	No hazard identified
Workers, long-term, dermal	Not available	1.1 mg/kg bw/d
Workers, long-term, inhalation	No hazard identified	3.9 mg/m ³

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:

Protect your hands with gloves of the following type

Material	Thickness	Breakthrough time
Neoprene	≥ 0.5 mm	≥ 480 min
–	–	–
Nitrile rubber (NBR)	≥ 0.35 mm	≥ 480 min
–	–	–

Section 8

Protect your hands with gloves of the following type

Material	Thickness	Breakthrough time
Butyl rubber (IIR)	0.5 mm	≥ 480 min
–	–	–
Viton or fluoroelastomer (FKM)	0.4 mm	≥ 480 min
–	–	–

SKIN PROTECTION

Wear category II 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, 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.

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

9 Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	pasty liquid	
Colour	brown	
Odour	amino	
Melting point / freezing point	< 0 °C (< 32 °F)	
Initial boiling point	> 180 °C (> 356 °F)	Remarks: pure product
Flammability	Not available	
Lower explosive limit	Not available	
Upper explosive limit	Not available	
Flash point	> 110 °C (> 230 °F)	
Auto-ignition temperature	Not available	
Decomposition temperature	Not available	
pH	not applicable, non-aqueous mixture	
Kinematic viscosity	Not available	
Dynamic viscosity	4,000 ≤ x ≤ 6,000 mPa·s	Temperature: 20 °C (68 °F)
Solubility	insoluble in water	
Partition coefficient: n-octanol/water	Not available	
Vapour pressure	the product is a mixture	
Density and/or relative density	1.1 ≤ x ≤ 1.3 kg/l	

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Relative vapour density	Not applicable	Remarks: not relevant due to the nature of the product, they do not provide proprietary information on its dangerousness
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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

Information not available.

10 Stability and reactivity

10.1 Reactivity

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

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Refer to the possibility of dangerous reactions and / or incompatible materials section.

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.

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Risk of explosion on contact with: peroxides

3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

May react dangerously with: strong oxidising agents, concentrated inorganic acids

10.4 Conditions to avoid

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

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Avoid contact with: peroxides, oxidising agents

3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Avoid contact with: strong acids, strong oxidants

10.5 Incompatible materials

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Incompatible with acids, mineral acids, sodium hypochlorite.

The product slowly corrodes copper, aluminum, zinc and galvanized surfaces.

Section 10

10.6 Hazardous decomposition products

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

In decomposition develops: nitric acid, ammonia, nitrogen oxide, carbon dioxide, carbon monoxide

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

Information not available.

11.1.3 Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available.

11.1.4 Interactive effects

Information not available.

11.1.5 ACUTE TOXICITY

ATE (Inhalation) of the mixture	Not classified (no significant component)	
ATE (Oral) of the mixture	> 2,000 mg/kg	
ATE (Dermal) of the mixture	> 2,000 mg/kg	

FATTY ACIDS, C18-INSATURES, DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENTETRAMINE

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

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

LD50 (Oral):	1,716 mg/kg	Species/guidelines: Rat
LD50 (Dermal):	1,465 mg/kg	Species/guidelines: Rabbit

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

LD50 (Oral):	500 mg/kg	Species/guidelines: Rat
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3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

LD50 (Oral):	1,030 mg/kg	
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TITANIUM DIOXIDE [in powder containing $\geq$ 1% of particles with aerodynamic diameter $\leq$ 10 μ m]

LD50 (Oral):	> 2,000 mg/kg	Species/guidelines: Rat
LC50 (Inhalation mists/powders):	> 6.82 mg/l	Exposure duration: 4 hours Species/guidelines: Rat

Reaction product of fatty, C18 alkyl acids with amines, polyethylene-polytetraethylenepentamine fraction

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

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11.1.6 SKIN CORROSION/IRRITATION

Corrosive for the skin

11.1.7 SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage.

11.1.8 RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

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

TITANIUM DIOXIDE [in powder containing $\geq 1\%$ of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

The classification as a carcinogen by inhalation applies only to mixtures in powder form containing 1% or more of titanium dioxide which is in the form of or incorporated in particles with aerodynamic diameter $\leq 10 \mu\text{m}$.

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

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.

12 Ecological information

The product is considered dangerous for the environment and is harmful to aquatic organisms with long-term negative effects on the aquatic environment.

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**FATTY ACIDS, C18-INSATURATES, DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENTETRAMINE**

EC50 - for Crustacea	7.07 mg/l	Exposure duration: 48 hours
LC50 - for Fish	7.07 mg/l	Exposure duration: 96 hours
EC50 - for Algae / Aquatic Plants	4.34 mg/l	Exposure duration: 72 hours

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AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

EC50 - for Crustacea	31.3 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	330 mg/l	Exposure duration: 96 hours Species/guidelines: Pimephales promelas
EC50 - for Algae / Aquatic Plants	20 mg/l	Exposure duration: 72 hours Species/guidelines: Pseudokirchneriella subcapitata
Chronic NOEC for Fish	150 mg/l	Species/guidelines: Pimephales promelas
Chronic NOEC for Algae / Aquatic Plants	< 2.5 mg/l	Species/guidelines: Pseudokirchneriella subcapitata

2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

EC50 - for Crustacea	718 mg/l	Exposure duration: 48 hours
LC50 - for Fish	964 mg/l	Exposure duration: 96 hours
EC50 - for Algae / Aquatic Plants	84 mg/l	Exposure duration: 72 hours

3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

EC50 - for Crustacea	23 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	110 mg/l	Exposure duration: 96 hours Species/guidelines: Leuciscus idus
EC50 - for Algae / Aquatic Plants	> 50 mg/l	Exposure duration: 72 hours Species/guidelines: Scenedesmus subspicatus

TITANIUM DIOXIDE [in powder containing ≥ 1% of particles with aerodynamic diameter ≤ 10 µm]

EC50 - for Crustacea	> 100 mg/l	Exposure duration: 48 hours
EC50 - for Algae / Aquatic Plants	100 mg/l	Exposure duration: 72 hours
Chronic NOEC for Algae / Aquatic Plants	> 5,600 mg/l	

Reaction product of fatty, C18 alkyl acids with amines, polyethylene-polytetraethylenepentamine fraction

EC50 - for Crustacea	5.18 mg/l	Exposure duration: 48 hours Species/guidelines: Daphnia magna
LC50 - for Fish	7.07 mg/l	Exposure duration: 96 hours Species/guidelines: Danio rerio
EC50 - for Algae / Aquatic Plants	2.63 mg/l	Exposure duration: 72 hours Species/guidelines: Pseudokirchneriella subcapitata
Chronic NOEC for Fish	5 mg/l	Species/guidelines: Danio rerio
Chronic NOEC for Algae / Aquatic Plants	0.5 mg/l	Species/guidelines: Pseudokirchneriella subcapitata

12.2 Persistence and degradability
FATTY ACIDS, C18-INSATURES, DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE

Solubility in water	40 mg/l	
Degradability	Inherently degradable	

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

Degradability	NOT rapidly degradable	
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2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Solubility in water	> 10,000 mg/l	
Degradability	NOT rapidly degradable	

3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Solubility in water	1,000 ≤ x ≤ 10,000 mg/l	
Degradability	NOT rapidly degradable	

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TITANIUM DIOXIDE [in powder containing $\geq 1\%$ of particles with aerodynamic diameter $\leq 10 \mu\text{m}$]

Solubility in water	< 0.001 mg/l	
Degradability	NOT rapidly degradable	

Reaction product of fatty, C18 alkyl acids with amines, polyethylene-polytetraethylenepentamine fraction

Degradability	NOT rapidly degradable	
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12.3 Bioaccumulative potential
FATTY ACIDS, C18-INSATURES, DIMERS, POLYMERS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENTETRAMINE

Partition coefficient n-octanol/water	10.34 LogKow
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2,4,6-TRIS(DIMETHYLAMINOMETHYL) PHENOL

Partition coefficient n-octanol/water	-0.66 LogKow
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3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Partition coefficient n-octanol/water	0.99 LogKow
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12.4 Mobility in soil
3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Partition coefficient soil/water	2.97 LogKoc
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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.

13 Disposal considerations
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	
HP 7	– Carcinogenic
HP 8	– Corrosive
HP 13	– Sensitising
HP 14	– Ecotoxic

14 Transport information

The product is not dangerous under current provisions of the Code of International Carriage of Dangerous Goods by Road (ADR) and

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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

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	
Contained substance		
	75	

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

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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.

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

None

3-AMINOMETIL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

REACH restriction 75 only applies to tattoo inks. Not applicable to the relevant identified uses of the product.

15.2 Chemical safety assessment

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

16 Other information

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

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 Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Corr. 1B	Skin corrosion, category 1B
Skin Corr. 1C	Skin corrosion, category 1C
Skin Irrit. 2	Skin irritation, category 2
Skin Sens. 1	Skin sensitization, category 1
Skin Sens. 1A	Skin sensitization, category 1A
H302	Harmful if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H351	Suspected of causing cancer.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

Legend

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate

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Legend

- 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
24. Delegated Regulation (EU) 2023/1434 (XIX ATP CLP)
25. Delegated Regulation (EU) 2023/1435 (XX ATP CLP)

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General Bibliography

- 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.