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

1.1 Product identifier

Commercial name :C-Systems 1010 UV Protection component A

UFI : 7Y10-K09D-800E-VFWA

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

Application Type (Use) : Casting resin

Restrictions on use recommended : Reserved for industrial and professional users.

1.2 Details of the supplier of the safety data sheet Society

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Telephone :**+39 0584 383694**

Person's email address:**info@cecchi.it** SDS Manager

1.2 Emergency telephone number

+ 44 1235 239670 (All languages)

CAVp "Bambino Gesù" Pediatric Hospital Rome Piazza Sant'Onofrio, 4 00165 Tel.06-68593726 Az. Osp. Univ. Foggia Foggia V.le Luigi Pinto, 1 71122 Tel.0881-732326 Az. Osp. "A. Cardarelli" Naples Via A. Cardarelli, 9 80131 Tel.081-7472870
CAV Policlinico "Umberto I" Rome Viale del Policlinico, 155 00161 Tel.06- 49978000
CAV Policlinico "A. Gemelli" Rome Largo Agostino Gemelli, 8 00168 Tel.06-3054343

Az. Osp. "Careggi" UO Medical Toxicology Florence Largo Brambilla, 3 50134 Tel.055- 7947819
CAV National Toxicological Information Center Pavia Via Salvatore Maugeri, 10 27100 Tel.0382-24444
Niguarda Ca' Granda Hospital Milan Piazza Ospedale Maggiore,3 20162 Tel.02-66101029 Papa Giovanni XXII Hospital Trust Bergamo Piazza OMS, 1 24127 Tel.800883300 Integrated University Hospital Trust (AOUI) of Verona Borgo Trento branch, Verona Tel. 800011858

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Skin irritation, Category 2 Eye irritation, Category 2	H315: Causes skin irritation. H319: Causes serious eye irritation.

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Skin sensitization, Category 1	H317: May cause an allergic skin reaction.
Reproductive toxicity, Category 1B	H360F: May damage fertility.
Long-term (chronic) aquatic hazard, Category 2	H411: Toxic to aquatic life with long lasting effects.

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) Hazard

pictograms	:	
Warning	:	Danger
Hazard statements	:	H315 Causes skin irritation. H317 May cause an allergic skin reaction. Causes H319 serious eye irritation. H360F May harm fertility. H411 Toxic to aquatic life with long lasting effects. duration.
Precautionary advice	:	**Prevention:** P201 Obtain specific instructions before use. Avoid P261 breathing mist or vapors. P273 Do not dispose of in the environment. P280 Wear gloves/protective clothing/protect your eyes eyes/ protect face/ protect hearing. **Reaction:** P308 + P313 IN CASE of exposure or possible exposure, seek medical advice. P391 Collect spillage.

Hazardous components to be reported on the label:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane

1,4-bis-(2,3-epoxypropoxy)-butane

Reaction product: bisphenol-F-epichlorohydrin; epoxy resins (number average molecular weight <= 700)

oxirane, mono[(C12-14-alkyloxy)methyl] derivatives

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate

2.3 Other dangers

This substance/mixture does not contain any components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or higher.

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Ecological information: The substance/mixture does not contain any components considered to have endocrine disrupting properties according to Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or above.

Toxicological information: The substance/mixture does not contain any components considered to have endocrine disrupting properties according to Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or above.

SECTION 3: Composition/information on ingredients

3.2 Mixtures

Chemical nature : Modified epoxy resin

Components

Chemical Name	CAS No. EC No. N. INDEX Number of registration	Classification	Concentration and (% w/w)
2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane	1675-54-3 216-823-5 603-073-00-2 01-2119456619-26	Skin Irrit. 2; H315 Eye Irrit. 2; H319 Skin Sens. 1; H317 Aquatic Chronic 2; H411 --- limits of concentration specific Eye Irrit. 2; H319 > = 5 % Skin Irrit. 2; H315 > = 5 %	> = 50 - <= 100
1,4-bis-(2,3-epoxypropoxy)-butane	2425-79-8 219-371-7 603-072-00-7 01-2119494060-45	Acute Tox. 4; H302 Repr. 1B; H360F	> = 12.5 - < 20
Reaction product: bisphenol-Fepiclohydrin; epoxy resins (number average molecular weight <= 700)	Not assigned 01-2119454392-40	Skin Irrit. 2; H315 Skin Sens. 1A; H317 Aquatic Chronic 2; H411	> = 7 - < 10
oxirane, mono[(C12-14-alkyloxy)methyl] derivatives	68609-97-2 271-846-8 603-103-00-4 01-2119485289-22	Skin Irrit. 2; H315 Skin Sens. 1; H317 Repr. 1B; H360F	> = 1 - < 3
Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-	1065336-91-5 01-2119491304-40	Skin Sens. 1A; H317 Repr. 2; H361f Aquatic Acute 1;	> = 0.1 - < 0.25

4-Piperidyl Sebacate		H400 Aquatic Chronic 1; H410 M-Factor (Toxicity acute for the environment aquatic): 1 M-Factor (Toxicity chronic for the aquatic environment): 1	

For explanations of abbreviations see paragraph 16.

SECTION 4: First aid measures

4.1 Description of first aid measures General information : Keep warm in a quiet place.
Show this safety data sheet to your doctor. Remove all contaminated clothing immediately.

If inhaled : Bring into the open air.
Place the person in a resting position and keep him at heat.
In case of unconsciousness, place on one side in a stable position and consult a doctor.
If symptoms persist, consult a doctor. If breathing is irregular or respiratory arrest occurs, perform artificial respiration.

In case of contact with skin : Wash immediately with soap and plenty of water. Do not use solvents or thinners.
If on clothing, remove clothing. If skin irritation persists, call a physician.

In case of contact with eyes : Rinse immediately with plenty of water, including under the eyelids, for at least 15 minutes.
If eye irritation persists, seek medical advice. If this is easy to do, remove contact lenses, if worn.

If ingested : Keep at rest.
Do not induce vomiting without first consulting a doctor.
Keep your respiratory tract clean.
If the symptoms persist, consult a doctor.

4.2 Main symptoms and effects, both acute and delayed
Symptoms : irritating effects

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Redness
sensitizing effects

4.3 Indication of any need to immediately consult a doctor and require special treatment

Treatment : The First Aid procedure should be agreed upon by consulting the competent occupational physician.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media Suitable extinguishing media : Foam
Sand
Carbon dioxide (CO2)
Water mist

Unsuitable extinguishing media : Water spray jet

5.2 Special hazards arising from the substance or mixture

Specific dangers against the fire : The pressure in hermetically sealed containers may increase under the influence of heat.
Cool closed containers near flames with water spray.

5.3 Recommendations for firefighters

Protective devices special for firefighters : In case of fire, wear respiratory equipment with independent air supply. Use personal protective equipment.

Learn more : In case of fire and/or explosion do not breathe fumes. Use extinguishing systems compatible with the local situation and the surrounding environment.
Immediately remove personnel to safe areas. Prevent fire extinguisher water from contaminating surface water or ground water.
Dispose of contaminated fire-fighting water and fire residue in accordance with current regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures Individual precautions : Refer to protective measures listed in sections 7 and 8.
Evacuate personnel to safe areas.
Use personal protective equipment.
Provide adequate ventilation.
Inform the responsible authorities in case of gas leakage, or in case of penetration into pipes, soil or sewers.

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6.2 Environmental precautions

Environmental precautions	:	Do not allow uncontrolled dumping of the product in the environment. Prevent material from entering drains or waterways. Local authorities must be informed if leaks cannot be contained.

6.3 Methods and materials for containment and cleanup

Remediation methods	:	Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust). Contain and collect spillage with non-combustible absorbent material (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal in accordance with local or national regulations (see section 13). Remove and transfer to an appropriately labeled container.

6.4 Reference to other sections

See Section 8 for personal protective equipment.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Warnings for safe use	:	Ensure sufficient air exchange and/or extraction in work environments. Avoid inhalation, ingestion and contact with skin and eyes. Wear protective clothing. People with a history of skin hypersensitivity or asthma, chronic allergies or recurrent respiratory diseases, do not should be employed in any process in which this mixture is used.
Indications against fires and explosions	:	Keep away from open flames, hot surfaces and sources of ignition.
Hygiene measures	:	Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2 Conditions for safe storage, including any incompatibilities

Warehouse and container requirements:		Keep containers tightly closed in a dry, cool and well-ventilated place. Keep in appropriately labeled containers.
Directions for the storage together with other products	:	Keep away from oxidizing agents, strong acids or bases and amines. Keep the product and empty containers away from heat sources and ignition sources. Keep away from food and drink.
Learn more about storage stability	:	Stable at normal ambient conditions of temperature and pressure.

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7.3 Specific end uses

Special uses : Consult the technical instructions for use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Does not contain substances with occupational exposure limit values.

Derived no-effect level (DNEL) according to Regulation (EC) No. 1907/2006:

Name of the substance	Final use	Street of exposure	Potentials consequences on the Health	Value
2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane	Workers	Contact with the skin	Acute systemic effects, Acute systemic effects long term	8.33 mg/kg
	Workers	Inhalation	Acute systemic effects, Long-term local effects	12.25 mg/m3
	Consumers	Contact with the skin	Acute systemic effects, Acute systemic effects long term	3,571 mg/kg
	Consumers	Ingestion	Acute systemic effects, Acute systemic effects long term	0.75 mg/kg
oxirane, mono[(C12-14-alkyloxy)methyl] derivatives	Workers	Contact with the skin	Systemic effects at long term	3.9 mg/kg
	Workers	Inhalation	Systemic effects at long term	13.8 mg/m3

Predicted no effect concentration (PNEC) according to Regulation (EC) No. 1907/2006:

Name of the substance	Environmental compartment	Value
2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane	Fresh water	0.006 mg/l
	Sea water	0.0006 mg/l
	Intermittent releases	0.018 mg/l
	Sewage Treatment Plant	10 mg/l
	Freshwater sediment	0.996 mg/kg
	Marine sediment	0.0996 mg/kg
	Soil	0.196 mg/kg
oxirane, mono[(C12-14-alkyloxy)methyl] derivatives	Sewage Treatment Plant	10 mg/l
	Fresh water	0.0072 mg/l
	Sea water	0.00072 mg/l
	Freshwater sediment	66.77 mg/kg
	Marine sediment	6,677 mg/kg
	Soil	80.12 mg/kg

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8.2 Exposure controls

Suitable technical checks

Effective exhaust ventilation system effective ventilation in all process areas

Personal protection

Eye protection	:	Do not wear contact lenses. Safety glasses with side protection in accordance with EN166 Ensure that eyewash stations and emergency showers are close to the workstation.
Hand protection		
Material	:	Protective gloves according to EN 374.
Material	:	butyl rubber
Permeation time	:	> 480 min
Thickness of the glove	:	0.35mm
Material	:	Neoprene
Permeation time	:	> 480 min
Thickness of the glove	:	0.35mm
Material	:	Nitrile rubber
Permeation time	:	> 480 min
Thickness of the glove	:	0.35mm
Observations	:	In case of prolonged or repeated contact, use gloves. Please observe the instructions regarding permeability and breakthrough time that are provided by the glove supplier. Please also take into account the specific local conditions in which the product is used, such as the risk of cuts, abrasion and duration of contact. The breakthrough time depends, among other things, on the type of material, the thickness and the type of glove and must therefore be measured for each specific case. The suitability for a specific workplace, should be discussed with the manufacturers of the protective gloves.
Skin and body protection	:	Protective suit
Respiratory protection	:	Use respiratory protection unless adequate exhaust ventilation is provided or exposure assessment demonstrates that exposure meets recommended guidelines. If vapours form, use a respirator with an approved filter. Equipment must comply with EN 14387. Apply the necessary technical measures to not exceed the occupational exposure limit values. This can be achieved by good general air exchange or, if practical, by a local extractor.
Protective measures	:	Avoid contact with skin. Wear appropriate protective clothing.

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SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	:	liquid
Color	:	light blue
Odor	:	light
Olfactory threshold	:	undetermined
Melting point/freezing point	:	Not applicable
Boiling point/range	:	> 200 °C
Upper explosive limit / Upper explosive limit flammability	:	Not applicable
Lower explosive limit / Lower limit of flammability	:	Not applicable
Flash point	:	150 °C
Temperature of self-ignition	:	Not applicable
Temperature of decomposition	:	No data available
pH	:	4 - 6 Concentration: 1%

Viscosity

Viscosity, dynamics	:	800 - 1,200 mPa.s (25 °C)
Viscosity, kinematics	:	not determined

The solubility/solubilities.

Water solubility	:	undetermined
Solubility in other solvents	:	undetermined
Partition coefficient: noctanol/ water	:	No data available
Vapor pressure	:	undetermined
Density	:	1.15 g/cm 3 (25 °C)
Apparent density	:	undetermined
Relative vapor density	:	undetermined

Particle Characteristics

Particle size : Not applicable

9.2 Other information

Explosives	:	Not applicable
Oxidizing properties	:	Not applicable
Evaporation rate	:	undetermined
Surface tension	:	undetermined
Sublimation point	:	Not applicable

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under recommended storage conditions.

10.2 Chemical stability

No decomposition if stored and used as directed.

10.3 Possibility of hazardous reactions

Dangerous reactions : Reacts with the following substances:
Bases
Strong oxidizing agents
Avoid amines.

10.4 Conditions to avoid

Conditions to avoid : No decomposition if used as directed.

10.5 Incompatible materials

Materials to avoid : Incompatible with oxidizing agents.

10.6 Hazardous decomposition products

This product can release the following:
Carbon monoxide, carbon dioxide or unburned hydrocarbons (smoke).

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Product:

Acute oral toxicity : Acute toxicity estimate: > 2,000 mg/kg
Method: Calculation method

Comments: No data available

Acute toxicity for inhalation : Acute toxicity estimate: > 20 mg/l
Exposure time: 4 h
Test atmosphere: steam
Method: Calculation method

Comments: No data available

Acute dermal toxicity	:	Acute toxicity estimate: > 2,000 mg/kg Method: Calculation method Comments: No data available
Acute toxicity (for other routes of administration)	:	Comments: No data available

Components:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane:

Acute oral toxicity:		LD50 (Rat, female): > 2,000 mg/kg Method: OECD Test Guideline 420 GLP: yes
Acute dermal toxicity	:	LD50 (Rat, male and female): > 2,000 mg/kg Method: OECD Test Guideline 402 GLP: yes

Skin corrosion/irritation

Product:

Observations : No data available

Components:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane:

Species	:	On rabbit
Exposure time	:	4 hours
Method	:	OECD Test Guideline 404 Skin Irritant
Result	:	
BPL	:	Yes

Serious eye damage/eye irritation

Product:

Observations : No data available

Respiratory or skin sensitization

Product:

Observations : No data available

Components:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane:

Type of test	:	Mouse Local Lymph Node assay (LLNA)
Species	:	Mouse
Method	:	OECD Test Guideline 429

Result	:	May cause sensitization by skin contact. yes
BPL	:	

Carcinogenicity

Product:

Observations : No data available

Reproductive toxicity

Product:

Effects on fertility : Remarks: No data available

Effects on fetal development : Remarks: No data available

Specific target organ toxicity (STOT) - single exposure

Product:

Observations : No data available

Specific target organ toxicity (STOT) - repeated exposure

Product:

Observations : No data available

Repeated dose toxicity

Product:

Observations : No data available

Danger in case of aspiration

Components:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane:
There is no classification for aspiration toxicity.

11.2 Information on other hazards

Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain any components considered having endocrine disrupting properties within the meaning of Article 57(f) of REACH or Delegated Regulation (EU) 2017/2100 of the Commission or of Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Learn more

Product:

Observations : No data available

SECTION 12: Ecological information

12.0 Toxicity

Product:

Toxicity to fish : Remarks: No data available

Toxicity to daphnia and other aquatic invertebrates : Remarks: No data available

Components:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane:

Toxicity to daphnia and : to other aquatic invertebrates
EC50 (Daphnia (water flea)): 1.7 mg/l
Exposure time: 48 h
Test type: Static test
Method: OECD Test Guideline 202 GLP: yes

Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) :
NOEC: 0.3 mg/l
Exposure time: 21 d
Species: Daphnia magna (Large water flea) Test type: semi-static test
Method: OECD Test Guideline 211 GLP: yes

Reaction mass of bis(1,2,2,6,6-pentamethyl-4-piperidyl) sebacate and methyl 1,2,2,6,6-pentamethyl-4-piperidyl Sebacate:

M-Factor (Acute Toxicity for the aquatic environment) : 1

M-Factor (Chronic Aquatic Toxicity) : 1

12.1 Persistence and degradability

Product:

Biodegradability : Remarks: No data available

Physical-chemical eliminability : Remarks: No data available

Components:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane:

Biodegradability :
Result: Not readily biodegradable. Method: OECD Test Guideline 301F GLP: yes

12.2 Bioaccumulative potential

Product:

Bioaccumulation : Remarks: No data available

Components:

2,2-bis-[4-(2,3-epoxypropoxy)phenyl]-propane:

Partition coefficient: n- : octanol/water log Pow: 3.242 (25 °C)
pH: 7.1
Method: OECD Test Guideline 117 GLP: yes

12.3 Mobility in soil No data available

12.4 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture does not contain any components considered both persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or higher.

12.5 Endocrine disrupting properties

Product:

Assessment : The substance/mixture does not contain any components considered having endocrine disrupting properties within the meaning of Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or above.

12.6 Other adverse effects

Product:

Additional ecological information : An environmental hazard cannot be ruled out in the event of unprofessional manipulation or disposal.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Product : In accordance with local and national regulations. Container dangerous when empty. Do not dispose of as household waste. Do not mix waste from different sources during collection.

Contaminated containers : Empty containers should be transported to a designated site

authorized for recycling or disposal.

SECTION 14: Transport information

14.1 UN number or ID number

ADR/RID/ADN	:	UN 3082
IMDG	:	UN 3082
IATA	:	UN 3082

14.2 UN official shipping name

ADR/RID/ADN	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, NOS (2,2-bis-[[4-(2,3-epoxypropoxy)phenyl]-propane)
IMDG	:	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, NOS (bis-[4-(2,3-epoxypropoxy)phenyl]propane)
IATA	:	Environmentally hazardous substance, liquid, nos (bis-[4-(2,3-epoxypropoxy)phenyl]propane)

14.3 Transport hazard class(es)

ADR/RID/ADN	:	9
IMDG	:	9
IATA	:	9

14.4 Packing group

ADR/RID/ADN

Packing group	:	III
Classification code	:	M6
Hazard Identification No.	:	90
Labels	:	9
Tunnel restriction code	:	-
Observations	:	ADR: These substances, when carried in single or combined packagings containing a net quantity per single or inner packaging of 5 litres or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of ADR provided that the packagings satisfy the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IMDG

Packing group	:	III
Labels	:	9
EmS Code	:	FA, SF
Observations	:	IMDG Code segregation group - none IMDG: Marine pollutants packaged in single or multiple packages

combined containing a net quantity per single or inner packaging of 5 litres or less for liquids or with a net mass per single or inner packaging of 5 kg or less for solids are not subject to all other provisions of this Code relating to marine pollutants provided that the packagings comply with the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8. In the case of marine pollutants which also meet the criteria for inclusion in another hazard class, all provisions of this Code relating to additional hazards continue to apply.

IATA (Cargo)

Packing Instructions (Air Cargo)	:	964
Packing Instructions (LQ)	:	Y964
Packing Group	:	III
Labels	:	Miscellaneous Dangerous Goods
Observations	:	IATA: These substances, when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 litres or less for liquids or having a net mass of 5 kg or less for solids, are not subject to other provisions of this Regulation provided that the packagings comply with the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8

IATA (Passenger)

Packing instructions (passenger aircraft)	:	964
Packing Instructions (LQ)	:	Y964
Packing group	:	III
Labels	:	Miscellaneous Dangerous Goods

14.5 Environmental hazards

ADR/RID/ADN

Dangerous for the environment	:	Yes

IMDG

Marine pollutant	:	Yes

IATA (Cargo)

Dangerous for the environment	:	Yes

14.6 Special precautions for users

Observations	:	The transport of dangerous goods, including loading and unloading, must be carried out by persons who have received the necessary training required by modal regulations.

The transport classification(s) provided herein are for informational purposes only and are based solely on the properties of the unpackaged material as described in this Safety Data Sheet. Transport classifications may vary based on mode of transport, package size, and variations in regional or national regulations.

14.7 Maritime transport in bulk in accordance with IMO acts Not applicable to product as supplied.

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SECTION 15: Regulatory information

15.1 Legislative and regulatory provisions on health, safety and environment specific for the substance or mixture

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII)	:	The restriction conditions for the following items must be considered: Number in list: 3
REACH - Candidate list of substances of very high concern for authorisation (Article 59).	:	Not applicable
Regulation (EC) No 2024/590 on substances that deplete the ozone layer	:	Not applicable
Regulation (EU) 2019/1021 on persistent organic pollutants (recast)	:	Not applicable
Regulation (EU) No 649/2012 of the European Parliament and of the Council concerning the export and import of dangerous chemicals	:	Not applicable
REACH - List of substances subject to authorisation (Annex XIV)	:	Not applicable
REGULATION (EU) 2019/1148 on the placing on the market and use of explosives precursors	:	Not applicable
International Chemical Weapons Convention (CWC), List of Precursor and Toxic Chemicals	:	Not applicable
Council Regulation (EC) No 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors	:	Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on control of major accident hazards involving dangerous substances.	E2	ENVIRONMENTAL HAZARDS

Other legislation : With reference to the composition of the product, no
We intentionally add none of the substances listed in the European Directive 2011/65/EU (RoHS 2, RoHS3 and China RoHS).
Therefore the product is in line with these guidelines.
We do not intentionally add Conflict minerals to the product.

15.2 Chemical safety assessment Not applicable

SECTION 16: Other information

Full text of H-Statements

H302	:	Harmful if swallowed.
H315	:	Causes skin irritation.

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H317	:	May cause an allergic skin reaction. Causes
H319	:	serious eye irritation.
H360F	:	May damage fertility. Suspected of
H361f	:	damaging fertility. Very toxic to aquatic
H400	:	life.
H410	:	Very toxic to aquatic life with long lasting effects.
H411	:	Toxic to aquatic life with long lasting effects.

Full text of other abbreviations Acute

Tox.	:	Acute toxicity
Aquatic Acute	:	Short-term (acute) aquatic hazard Long-term (chronic)
Aquatic Chronic	:	aquatic hazard Eye irritation
Eye Irrit.	:	
Repr.	:	Reproductive toxicity Skin
Skin Irrit.	:	irritation
Skin Sens.	:	Skin sensitization

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for Materials Testing; bw - Body weight; CLP - Classification, Labelling and Packaging Regulation; Regulation (EC) No. 1272/2008; CMR - Carcinogenic, Mutagenic or Reproductive Toxic; DIN - German Institute for Standardization Standard; DSL - Domestic List of Substances (Canada); ECHA - European Chemicals Agency; EC-Number - European Community Number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx
- Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships Carrying Dangerous Chemicals in Bulk; IC50 - Half Maximum Inhibitory Concentration; ICAO - International Civil Aviation Organization; IECSC - China Inventory of Existing Chemical Substances; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Act (Japan); ISO - International Organization for Standardization; KECI - Korea Inventory of Existing Chemical Substances; LC50 - 50% Lethal Concentration for a test population; LD50 - 50% Lethal Dose for a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; nos - not otherwise specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observed Effect Loading Rate; NZIo C - New Zealand Chemical Inventory; OECD - Organisation for Economic Co-operation and Development; OPPTS - Bureau of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippine Chemical Inventory; (Q)SAR - (Quantitative) Structure Activity Relationships; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of Very High Concern; TCSI - Taiwan Chemical Inventory; TECI - Thailand Inventory of Existing Chemical Substances; TRGS - Technical Rule for Hazardous Substances; TSCA - Toxic Substances Control Act (United States); UN - United Nations; vPvB - Very Persistent and Very Bioaccumulative

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Learn more

Directions on training	:	Providing operators with information, instructions and training.
more information	:	Sections with a gray background indicate changes from the previous version.
Sources of the main data used to compile the sheet	:	Information taken from reference works and archives. See list above.

Mixture classification:		**Classification procedure:**
Skin Irrit. 2	H315	Calculation method
Eye Irrit. 2	H319	Calculation method
Skin Sens. 1	H317	Calculation method
Repr. 1B	H360F	Calculation method
Aquatic Chronic 2	H411	Calculation method

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the time of publication. The information is provided solely for the purpose of enabling the correct and safe use, storage, transportation and disposal of the product. This information should not be considered a guarantee or specification of the quality of the product.

IT / IT

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

1.1. Product identifier

Product code : 1010 UV Protection B
Trades code : 024

UFI: R220-20YS-J00W-JTGD

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

Sectors of use:
Industrial Manufacturing[SU3], Public domain[SU22]

Uses advised against
Do not use for purposes other than those listed

1.3. Details of the supplier of the safety data sheet

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National contact: Hospital Gozo

1.4. Emergency telephone number

+356 21561600

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

2.1.1 Classification according to Regulation (EC) No 1272/2008:

Pictograms:
GHS05, GHS07, GHS09

Hazard Class and Category Code(s):
Acute Tox. 4, Skin Corr. 1A, Skin Sens. 1A, Eye Dam. 1, Aquatic Chronic 2

Hazard statement Code(s):
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H318 - Causes serious eye damage.
H411 - Toxic to aquatic life with long lasting effects.

Harmful product: do not ingest
Corrosive product: causes severe skin burns and eye damage.

The product, if brought into contact with skin can cause skin sensitization.
If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.
The product is dangerous to the environment as it is toxic to aquatic life with long lasting effects

2.2. Label elements

Labelling according to Regulation (EC) No 1272/2008:



Pictogram, Signal Word Code(s):
GHS05, GHS07, GHS09 - Danger

Hazard statement Code(s):
H302 - Harmful if swallowed.
H314 - Causes severe skin burns and eye damage.
H317 - May cause an allergic skin reaction.
H411 - Toxic to aquatic life with long lasting effects.

Supplemental Hazard statement Code(s):
not applicable

Precautionary statements:
Prevention
P273 - Avoid release to the environment.
P280 - Wear protective gloves/protective clothing/eye protection/face protection.
Response
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTER/doctor.
P391 - Collect spillage.

Contains:
benzyl alcohol, Bicyclo[2.2.1]heptanebis(methylamine), 3-aminomethyl-3,5,5-trimethylcyclohexylamine, 4,4'-Isopropylidenediphenol, oligomeric reaction products with 1-chloro-2,3-epoxypropane, reaction products with trimethylhexane-1,6-diamine, Poly[oPoly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-, 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine

Two-pack reactive performance coatings for specific end use such as floors - VOC limit 500 g/l

Content of VOC ready to use condition: 750,00 g/l

UFI: R220-20YS-J00W-JTGD

2.3. Other hazards

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

This substance/mixture contains no components that are considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at concentrations of 0.1% or higher.
ecological information: The substance/mixture does not contain any components considered to have endocrine disrupting properties according to Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.
toxicological information: The substance/mixture does not contain any components considered to have endocrine disrupting properties according to Article 57(f) of REACH or Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

The use of this chemical agent involves the obligation of "risk assessment" by the employer in accordance with the provisions of Legislative Decree n. 81 April 9, 2008. Workers exposed to this chemical agent should not be subject to health surveillance if the results of the risk assessment show that, depending on the type and amount of hazardous chemical agent and the method and frequency of exposure to the agent, you only a "moderate risk" for the health and safety of workers and that the measures envisaged in the same legislative decree are sufficient to reduce the risk.

SECTION 3. Composition/information on ingredients

3.1 Substances

Irrilevant

3.2 Mixtures

Refer to paragraph 16 for full text of hazard statements

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
benzyl alcohol	>= 30 < 50%	Acute Tox. 4, H302; Eye Irrit. 2, H319; Acute Tox. 4, H332 ATE oral = 1,6 mg/kg ATE dermal > 4.178,0 mg/kg ATE inhal > 2.000,0mg/l/4 h	603-057-00-5	100-51-6	202-859-9	01-2119492630-38-0000
Bicyclo[2.2.1]heptanebis(methylamine)	>= 30 < 50%	Acute Tox. 4, H302; Skin Sens. 1, H317; Acute Tox. 4, H332; Aquatic Chronic 3, H412 Acute toxicity M-factor = 1 Chronic toxicity M-factor = 1 ATE oral = 1.000,0 mg/kg	ND	56602-77-8	260-280-7	01-2120752792-48-0000
3-aminomethyl-3,5,5-trimethylcyclohexylamine	>= 10 < 20%	Acute Tox. 4, H302; Skin Corr. 1B, H314; Skin Sens. 1, H317; Eye Dam. 1, H318 ATE oral = 1.030,0 mg/kg ATE dermal > 1,1 mg/kg	612-067-00-9	2855-13-2	220-666-8	01-2119514687-32-0000
4,4'-Isopropylidenediphenol, oligomeric reaction products with	>= 5 < 10%	EUH071; Skin Corr. 1B, H314; Eye Dam.	ND	153195-44-9	500-332-0	01-2120781950-47-00

Substance	Concentration[w/w]	Classification	Index	CAS	EINECS	REACh
1-chloro-2,3-epoxypropane, reaction products with trimethylhexane-1,6-diamine		1, H318; Aquatic Acute 1, H400 Acute toxicity M-factor = 1 Chronic toxicity M-factor = 1				01
Poly[oPoly[oxy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)], .alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-	>= 5 < 10%	Skin Corr. 1C, H314; Eye Dam. 1, H318; Aquatic Chronic 3, H412 Acute toxicity M-factor = 1 Chronic toxicity M-factor = 1 ATE oral = 2.885,3 mg/kg ATE dermal > 0,7 mg/kg ATE inhal = 2.979,7mg/l/4 h	ND	9046-10-0	618-561-0	01-2119557899-12-0000
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine	>= 3,00 < 5%	Acute Tox. 4, H302; Skin Corr. 1A, H314; Skin Sens. 1A, H317; Eye Dam. 1, H318 ATE oral = 910,0 mg/kg	ND	25513-64-8	247-063-2	01-2119560598-25-0000

SECTION 4. First aid measures

4.1. Description of first aid measures

General information:
Show this MSDS to the attending physician. Keep warm in a quiet room. Remove all contaminated clothing immediately.

If inhaled:
Remove to fresh air.
Place the affected person in a resting position and keep warm.
In case of unconsciousness place on the side in a stable position and consult a doctor.
If discomfort persists, consult a physician.
In case of irregular breathing or respiratory arrest give artificial respiration.

In case of skin contact:
Wash immediately with soap and plenty of water.
Do not use solvents or thinners.
If it gets on clothing, remove clothing.
Burns should be treated by a physician.

In case of eye contact:
Rinse immediately with plenty of water, including under the eyelids, for at least 15 minutes.
If eye irritation persists, seek medical attention.
If this is easy, remove contact lenses if they are worn.

If ingested:
DO NOT induce vomiting.
If the casualty vomits while supine, turn the casualty onto his side.
Call a physician immediately

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

Burn
superficial burning sensation
Redness
Severe irritation

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

The First Aid procedure should be agreed upon in consultation with the competent occupational physician.

SECTION 5. Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Carbon dioxide (CO_2)
Foam
Dry powder
Aqueous mist

Unsuitable extinguishing media:
Not known.

5.2. Special hazards arising from the substance or mixture

Pressure in tightly closed containers may increase under the influence of heat.
Cool closed containers near flames with water spray.
Hazardous decomposition products in case of fire.

5.3. Advice for firefighters

Special protective equipment for firefighters:
In case of fire, wear breathing apparatus with independent air supply. Use personal protective equipment.

Additional information:
In case of fire and/or explosion, do not breathe fumes.
Use extinguishing systems compatible with the local situation and surroundings.
Immediately move personnel away to safe areas.
Prevent fire extinguisher water from contaminating surface water or groundwater.

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1 For non-emergency personnel:
Leave the area surrounding the spill or release. Do not smoke
Wear mask, gloves and protective clothing.

6.1.2 For emergency responders:
Wear mask, gloves and protective clothing. Appropriate: Nitrile rubber
Eliminate all unguarded flames and possible sources of ignition. No smoking.
Provision of sufficient ventilation.
Evacuate the danger area and, in case, consult an expert.

6.2. Environmental precautions

Contain spill with earth or sand.
If the product has entered a watercourse in sewers or has contaminated soil or vegetation, notify it to the authorities.
Discharge the remains in compliance with the regulations

6.3. Methods and material for containment and cleaning up

6.3.1 For containment:
Rapidly recover the product, wear a mask and protective clothing
Recover the product for reuse, if possible, or for removal. Possibly absorb it with inert material.
Prevent it from entering the sewer system.

6.3.2 For cleaning up:
To clean the floor and all objects contaminated by this material use sand, silica gel, universal binder.
After wiping up, wash with water the area and materials involved

6.3.3 Other information:
Wipe up with inert materials (e.g., sand, silica gel, acid binder, universal binder).
Contain and collect accidental spillage with non-combustible absorbent material (e.g., sand, soil, kieselguhr, vermiculite) and place in a container for disposal according to local or national guidelines (refer to Section 13).
Pick up and transfer to an appropriately labeled container.

6.4. Reference to other sections

Refer to paragraphs 8 and 13 for more information

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Ensure sufficient air exchange and/or exhaust in work rooms.
Do not breathe vapors or aerosols.
Avoid inhalation, ingestion and contact with skin and eyes.
Wear protective clothing.
Persons with a history of skin hypersensitivity or asthma, chronic allergies or recurrent respiratory illness should not be employed in any process in which this mixture is used.

Advice against fire and explosion:
Keep away from open flames, hot surfaces and sources of ignition.

Hygiene measures:
Provide adequate ventilation. Wash hands and face before breaks and immediately after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Keep in original container closed tightly. Do not store in open or unlabeled containers.
Keep containers upright and safe by avoiding the possibility of falls or collisions.
Store in a cool place, away from sources of heat and `direct exposure of sunlight.

7.3. Specific end use(s)

Industrial Manufacturing:
Handle with extreme caution.
Store in a well ventilated place away from heat sources.

Public domain:
Handle with care. Store in a ventilated area and away from heat, keep the container tightly closed.

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Related to contained substances:
benzyl alcohol:
TLV - TWA: 5 ppm, 22 mg/m3
TLV - STEL: 5-10 ppm, 44 mg/m3
MAK: IIb

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
MAK: IIb (not defined but data available) skin sensitization (Sh); (DFG 2006).

- Substance: benzyl alcohol
DNEL
Systemic effects Long term Workers inhalation = 22 (mg/m3)
Systemic effects Long term Workers dermal = 8 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 5,4 (mg/m3)
Systemic effects Long term Consumers dermal = 4 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 4 (mg/kg bw/day)
Systemic effects Short term Workers inhalation = 110 (mg/m3)
Systemic effects Short term Workers dermal = 40 (mg/kg bw/day)
Systemic effects Short term Consumers inhalation = 27 (mg/m3)
Systemic effects Short term Consumers dermal = 20 (mg/kg bw/day)
Systemic effects Short term Consumers oral = 20 (mg/kg bw/day)
PNEC
Sweet water = 1 (mg/l)
sediment Sweet water = 5,27 (mg/kg/sediment)
Sea water = 0,1 (mg/l)
sediment Sea water = 0,527 (mg/kg/sediment)
STP = 39 (mg/l)
ground = 0,456 (mg/kg ground)

- Substance: Bicyclo[2.2.1]heptanebis(methylamine)

DNEL
Systemic effects Long term Workers inhalation = 0,4 (mg/m3)
Systemic effects Long term Workers dermal = 0,05 (mg/kg bw/day)
Systemic effects Long term Consumers inhalation = 0,09 (mg/m3)
Systemic effects Long term Consumers dermal = 0,03 (mg/kg bw/day)
Systemic effects Long term Consumers oral = 0,03 (mg/kg bw/day)
Systemic effects Short term Workers inhalation = 2,112 (mg/m3)
Systemic effects Short term Workers dermal = 0,3 (mg/kg bw/day)
Systemic effects Short term Consumers inhalation = 0,52 (mg/m3)
Systemic effects Short term Consumers dermal = 0,15 (mg/kg bw/day)
Systemic effects Short term Consumers oral = 0,15 (mg/kg bw/day)

- Substance: 3-aminomethyl-3,5,5-trimethylcyclohexylamine
DNEL
Systemic effects Long term Consumers oral = 0,3 (mg/kg bw/day)
Systemic effects Short term Consumers oral = 0,3 (mg/kg bw/day)
Local effects Long term Workers inhalation = 0,073 (mg/m3)
Local effects Short term Workers inhalation = 0,073 (mg/m3)
PNEC
Sweet water = 0,06 (mg/l)
sediment Sweet water = 5,784 (mg/kg/sediment)
Sea water = 0,006 (mg/l)
sediment Sea water = 0,578 (mg/kg/sediment)
STP = 3,18 (mg/l)
ground = 1,121 (mg/kg ground)

- Substance: Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-
DNEL
Systemic effects Long term Workers inhalation = 5,29 (mg/m3)
Systemic effects Long term Workers dermal = 2,5 (mg/kg bw/day)
PNEC
Sweet water = 0,015 (mg/l)
sediment Sweet water = 0,132 (mg/kg/sediment)
Sea water = 0,014 (mg/l)
sediment Sea water = 0,125 (mg/kg/sediment)
STP = 7,5 (mg/l)
ground = 0,018 (mg/kg ground)

- Substance: 2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine
DNEL
Systemic effects Long term Consumers oral = 0,05 (mg/kg bw/day)
PNEC
Sweet water = 0,12 (mg/l)
sediment Sweet water = 0,622 (mg/kg/sediment)
Sea water = 0,01 (mg/l)
sediment Sea water = 0,062 (mg/kg/sediment)
STP = 72 (mg/l)
ground = 10 (mg/kg ground)

8.2. Exposure controls



Appropriate engineering controls:
Effective effluent ventilation system
Effective ventilation in all process areas

Eye protection:
Safety glasses with side protection in accordance with EN166
Do not wear contact lenses.
Ensure that eye washers and emergency showers are close to the workstation.

Skin and body protection:
Coveralls
Preventive skin protection suggested

Respiratory protection:
Use a respirator during manipulations involving possible exposure to product vapor.
The filter class of the respirator should be appropriate for the maximum expected concentration of the contaminant (gas/vapor/particulate) that could occur when handling the product. If the concentration is exceeded, a self-contained respirator must be used.
Suggested filter type:
Filter - ABEK
Equipment must comply with EN 14387

Protective precautions:
Avoid contact with skin.
Wear appropriate protective clothing.

Industrial Manufacturing:
No specific checks required

Public domain:
No specific monitoring foreseen

Individual protection measures:

(a) Eye / face protection
When handling the pure product use safety glasses (spectacles cage) (EN 166).

(b) Skin protection

(i) Hand protection
Protective gloves in accordance with EN 374.
Suitable material Nitrile rubber

(ii) Other
When handling the pure product wear full protective skin clothing.

(c) Respiratory protection
Not needed for normal use.

(d) Thermal hazards
No hazard to report

Environmental exposure controls:
Related to contained substances:
benzyl alcohol:
Do not discard into the sewer system.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical and chemical properties	Value	Determination method
Physical state	liquid	
Colour	pale yellow	
Odour	ammonia like	
Odour threshold	not determined	
Melting point/freezing point	irrelevant	
Boiling point or initial boiling point and boiling range	> 200 °C	
Flammability	irrelevant	
Lower and upper explosion limit	irrelevant	
Flash point	irrelevant	ASTM D92
Auto-ignition temperature	not determined	
Decomposition temperature	not determined	
pH	11, concentrazzione 1%	
Kinematic viscosity	not determined	
Solubility(ies)	not determined	
Water solubility	not determined	
Partition coefficient n-octanol/water (log value)	not determined	
Vapour pressure	not determined	
Density and/or relative density	1,01 g/cm3 (25 °C)	
Relative vapour density	not determined	
Particle characteristics	irrelevant	

9.2. Other information

Content of VOC ready to use condition: 750,00 g/l

9.2.1 Information with regard to physical hazard classes

a) Explosives

i) sensitivity to shock
Irrilevant

ii) effect of heating under confinement
Irrilevant

iii) effect of ignition under confinement
Irrilevant

iv) sensitivity to impact
Irrilevant

v) sensitivity to friction
Irrilevant

vi) thermal stability
Irrilevant

vii) package
Irrilevant

b) Flammable gases

i) Tci / explosion limits
Irrilevant

ii) fundamental burning velocity
Irrilevant

c) Aerosols
Irrilevant

d) Oxidising gases
Irrilevant

e) Gases under pressure
Irrilevant

f) Flammable liquids
Irrilevant

g) Flammable solids

i) burning rate, or burning time as regards metal powders
Irrilevant

ii) statement on whether the wetted zone has been passed
Irrilevant

h) Self-reactive substances and mixtures

i) decomposition temperature
Irrilevant

ii) detonation properties
Irrilevant

iii) deflagration properties
Irrilevant

iv) effect of heating under confinement
Irrilevant

v) explosive power, if applicable
Irrilevant

i) Pyrophoric liquids

Irrilevant

j) Pyrophoric solids

i) statement on whether spontaneous ignition occurs when poured or within five minutes thereafter, as regards solids in powder form
Irrilevant

ii) statement on whether pyrophoric properties could change over time
Irrilevant

k) Self-heating substances and mixtures

i) statement on whether spontaneous ignition occurs and the maximum temperature rise obtained
Irrilevant

ii) results of screening tests referred to in section 2.11.4.2 of Annex I to Regulation (EC) No 1272/2008, if relevant and available
Irrilevant

l) Substances and mixtures, which emit f lammable gases in contact with water. The following information may be provided

i) identity of the emitted gas, if known
Irrilevant

ii) statement on whether the emitted gas ignites spontaneously
Irrilevant

iii) gas evolution rate
Irrilevant

m) Oxidising liquids
Irrilevant

n) Oxidizing solids
Irrilevant

o) Organic peroxides

i) decomposition temperature
Irrilevant

ii) detonation properties
Irrilevant

iii) deflagration properties
Irrilevant

iv) effect of heating under confinement
Irrilevant

v) explosive power
Irrilevant

p) Corrosive to metals

i) metals that are corroded by the substance or mixture
Irrilevant

ii) corrosion rate and statement on whether it refers to steel or aluminium
Irrilevant

iii) reference to other sections of the safety data sheet with regard to compatible or incompatible materials
Irrilevant

q) Desensitised explosives

i) desensitising agent used
Irrilevant

ii) exothermic decomposition energy
Irrilevant

iii) corrected burning rate (Ac)
Irrilevant

iv) explosive properties of the desensitised explosive in that state
Irrilevant

9.2.2 Other safety characteristics

a) mechanical sensitivity
Irrilevant

b) self-accelerating polymerisation temperature
Irrilevant

c) formation of explosible dust/air mixtures
Irrilevant

d) acid/alkaline reserve
Irrilevant

e) evaporation rate
Irrilevant

f) miscibility
Irrilevant

g) conductivity
Irrilevant

h) corrosiveness
Irrilevant

i) gas group
Irrilevant

j) redox potential
Irrilevant

k) radical formation potential
Irrilevant

l) photocatalytic properties
Irrilevant

SECTION 10. Stability and reactivity

10.1. Reactivity

Stable under recommended storage conditions.

10.2. Chemical stability

No decomposition when stored and used as directed.

10.3. Possibility of hazardous reactions

Reacts with the following substances: Acids Strong oxidizing agents.

10.4. Conditions to avoid

No decomposition if used as directed.

10.5. Incompatible materials

Strong acids
Strong oxidizing agents

10.6. Hazardous decomposition products

This product can release the following: Nitrogen oxides (NOx) Carbon monoxide Carbon dioxide (CO2)

SECTION 11. Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

ATE(mix) oral = 3,1 mg/kg
ATE(mix) dermal = ∞
ATE(mix) inhal = 22,0 mg/l/4 h

(a) acute toxicity: Harmful product: do not ingest
benzyl alcohol: Oral, Rat species, Wistar strain, Male sex, LD50 1.55 mL/kg bw
Inhalation, Rat species, Wistar strain, Male/female sex, LC50 > 4178 mg/m3 air
Dermal, Species rabbit, Strain not determined, Sex not determined, LD50 > 2 000 mg/kg bw
Bicyclo[2.2.1]heptanebis(methylamine): Oral, rat species, Sprague-Dawley strain, male/female sex, LD50 > 1 000 - < 1 400 mg/kg bw
Inhalation, no data available
Dermal, no data available
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Oral, rat species, Sprague-Dawley strain, male sex, LD50 1030 mg/kg bw
Inhalation, rat species, Sprague-Dawley strain, male/female sex, LC50 >= 1.07 - <= 5.01 mg/L air
Dermal, rat species, Sprague-Dawley strain, male/female sex, LD50 > 2000 mg/kg bw
Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-: Oral, Rat species, Sprague-Dawley strain, Sex male/female, LD50 2 885.3 mg/kg bw
Inhalation, Rat species, Sprague-Dawley strain, Sex male/female, LC50 > 0.74 mg/L air
Dermal, rabbit, New Zealand White strain, Sex male/female, LD50 2 979.7 mg/kg bw
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine: Oral LD50 910 mg/kg bw
(b) skincorrosion/irritation: Corrosive product: causes severe skin burns and eye damage.
Bicyclo[2.2.1]heptanebis(methylamine): Corrosive to the skin
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Corrosive to the skin
Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-: Corrosive to skin and eyes
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine: Corrosive to the skin
benzyl alcohol: Non-irritating
(c) serious eye damage/irritation: Corrosive product: causes severe skin burns and eye damage. - If brought into contact with eyes, the product causes serious damages to eyes, such as an opaque cornea or injury to iris.
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Corrosive to the eyes
2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine: Corrosive to the eyes
benzyl alcohol: Iirritating
(d) respiratoryorskinsensitisation: The product, if brought into contact with skin can cause skin sensitization.
benzyl alcohol: Not classified
Bicyclo[2.2.1]heptanebis(methylamine): Not classified
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Sensitizer category 1A
Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-: Data not available
(e) germ cell mutagenicity: benzyl alcohol: Not classified
Bicyclo[2.2.1]heptanebis(methylamine): Not classified
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Not classified
(f) carcinogenicity: benzyl alcohol: Not classified
Bicyclo[2.2.1]heptanebis(methylamine): No data available
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Not classified
Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-: No specific carcinogenicity data are available on the test substance. According to REACH Annex X, a carcinogenicity study may be required if the substance has widespread dispersive use or if there is evidence of frequent or long-term human exposure and if the substance is classified as a category 3 mutagen or if there is evidence from repeated dose studies that the substance is capable of inducing hyperplasia and/or pre-neoplastic lesions. Based on the available data, the test substance is not classified as a mutagen and there was no evidence of hyperplasia and/or pre-neoplastic lesions in a 90-day

skin toxicity study. Based on the weight of evidence, there are sufficient data to conclude that the test substance is not carcinogenic.
(g) eproductivetoxicity: benzyl alcohol: Not classified
Bicyclo[2.2.1]heptanebis(methylamine): Not classified
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Not classified
Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-: Not còassified
(h) specific target organ toxicity (STOT) single exposure: benzyl alcohol: Not classified
Bicyclo[2.2.1]heptanebis(methylamine): Not classified
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Not classified
Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-: Data not available
(i) specific target organ toxicity (STOT) repeated exposurebenzyl alcohol: Not classified
Bicyclo[2.2.1]heptanebis(methylamine): Not classified
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Not classified
Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-: Not classified
(j) aspiration hazard: benzyl alcohol: Not classified
Bicyclo[2.2.1]heptanebis(methylamine): No data available
3-aminomethyl-3,5,5-trimethylcyclohexylamine: Not classified

Related to contained substances:
benzyl alcohol:
Routes of exposure: the substance can be absorbed into the body by inhalation of its vapour and by ingestion.
INHALATION RISK: can not be given any indication about the speed with which it reaches a harmful contamination in the air due to evaporation of the substance at 20 C.
Effects of short-term exposure: the aerosol is irritating to eyes and skin. Pu substance determining effects on the nervous system effects of REPEATED EXPOSURE or long-term repeated or prolonged contact may cause skin sensitization.

Acute hazards/symptoms INHALATION cough. Vertigo. Headache.
SKIN Redness.
EYE Redness.
SWALLOWED, abdominal pain. Diarrhea. Drowsiness. Nausea. Vomiting.
LD50 (rat) Oral (mg/kg body weight) = 1,55
LD50 Dermal (rat or rabbit) (mg/kg body weight) > 4178
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) > 2000

Bicyclo[2.2.1]heptanebis(methylamine):
LD50 (rat) Oral (mg/kg body weight) = 1000

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
WAYS OF EXPOSURE:The substance can be absorbed into the body by inhalation of its vapors and by ingestion.
RISKS BY INHALATION:No indication can be given as to the rate at which harmful contamination is achieved in the air by evaporation of the substance at 20°C.
EFFECTS OF SHORT-TERM EXPOSURE:The substance is corrosive to the eyes, skin and respiratory tract. Corrosive by ingestion. Inhalation of vapor may cause pulmonary edema (see Notes). Effects may be delayed. Medical observation is indicated.
EFFECTS OF REPEATED OR LONG-TERM EXPOSURE:Repeated or prolonged contact may cause skin sensitization

ACUTE RISKS/SYMPTOMS
INHALATION Corrosive. Sore throat. Coughing. Burning sensation. Shortness of breath. Difficulty breathing. Symptoms may present late (see Notes).
CUTE Corrosive. Pain. Redness. Blistering. Skin burns. Burning sensation.
EYES Pain. Redness. Severe deep burns. Loss of vision.
INGESTION Corrosive. Burning sensation. Abdominal pain. Shock or collapse. (See Inhalation).

N O T E Symptoms of pulmonary edema often do not occur for several hours and are aggravated by physical exertion. Rest and medical observation are therefore essential. Immediate administration of appropriate inhalation therapy by a physician or personnel authorized by him/her should be expected.
LD50 (rat) Oral (mg/kg body weight) = 1030
LD50 Dermal (rat or rabbit) (mg/kg body weight) > 1,07

Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:
LD50 (rat) Oral (mg/kg body weight) = 2885,3
LD50 Dermal (rat or rabbit) (mg/kg body weight) > 0,74
CL50 Inhalation (rat) vapour/dust/mist/fume (mg/l/4h) or gas (ppmV/4h) = 2979,7

2,2,4(or 2,4,4)-trimethylhexane-1,6-diamine:
LD50 (rat) Oral (mg/kg body weight) = 910

11.2. Information on other hazards

No data available.

SECTION 12. Ecological information

12.1. Toxicity

Related to contained substances:
benzyl alcohol:
Fish toxicity Static test.
LC50 - Pimephales promelas (American chub) - 460 mg/l - 96 h (US-EPA)

Toxicity to daphnia and other aquatic invertebrates.
Immobilization EC50 - Daphnia magna (Large water flea) - 230 mg/l - 48 h
(OECD Test Guideline 202)

Toxicity to algae Static test CE50r
Pseudokirchneriella subcapitata (Chlorophyceous algae) - 700 mg/l - 72 h
(Guideline 201 for the OECD Test)
Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

Bicyclo[2.2.1]heptanebis(methylamine):
Acute fish toxicity, Oryzias latipes, LC50 > 133 mg/L
Chronic fish toxicity, no data available
Acute invertebrate toxicity, Daphnia magna, EC50 54 mg/L
Chronic invertebrate toxicity, no data available
Algal toxicity, Raphidocelis subcapitata, EC50 35 mg/L

C(E)L50 (mg/l) = 133 Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Acute fish toxicity, Leuciscus idus, LC100 140 mg/L
Chronic fish toxicity, no data available
Acute invertebrate toxicity, Daphnia magna, EC100 66.4 mg/L

Chronic invertebrate toxicity, Daphnia magna, NOEC 3 mg/L
Algal toxicity, Desmodesmus subspicatus, EC50 37 mg/L
Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:
Acute fish toxicity, Cyprinodon variegatus, 96 h LC50 772.14 mg/L
Chronic fish toxicity, data not available
Acute invertebrate toxicity, Daphnia magna, 48 h EC50 80 mg/L
Chronic invertebrate toxicity, data not available
Algal toxicity, Raphidocelis subcapitata, 72 h EC50 15 mg/L
Acute toxicity M-factor = 1
Chronic toxicity M-factor = 1

The product is dangerous for the environment as it is toxic to aquatic organisms following acute exposure.

Use according to good working practices to avoid pollution into the environment.

12.2. Persistence and degradability

Related to contained substances:
benzyl alcohol:
Biodegradability
aerobic - Exposure time 14 d
Result: 92 - 96 % - Readily biodegradable. (301 C Guidelines for the OECD Test).
aerobic - Exposure time 21 d
Result: 95 - 97 % - Readily biodegradable. (301 A Guidelines for the OECD Test).

Required biochemical oxygen (BOD) 1.550 mg/g, Remarks: (Lett.).
Theoretical oxygen required 2.515 mg/g, Remarks: (IUCLID)

BOD/ThBOD ratio 62 %, Remarks: (Lett.)

Bicyclo[2.2.1]heptanebis(methylamine):
The ready biodegradability of the test material was analyzed in a study conducted under GLP conditions and in accordance with the standardized OECD Guideline 301 C (Ready Biodegradability: Modified MITI Test (I)).

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
Summarizing the available experimental and calculated data, it is concluded that IPDA (CAS 2855-13-2) is not readily biodegradable (according to OECD criteria).

Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:
Two biodegradation tests are available (Clarke, 2010; Stillmeadow Inc., 2006). Both show that almost no biodegradation occurs after 28 days. Therefore, the test substance was not considered readily biodegradable. Relevant degradation products of the test substance were predicted using the EAWAG-BBD Pathway Prediction System model. All identified degradation products were found not to be readily biodegradable in a subsequent QSAR exercise using EPISuite models.

12.3. Bioaccumulative potential

Related to contained substances:
benzyl alcohol:
No data available

Bicyclo[2.2.1]heptanebis(methylamine):
No data available

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
No data available

Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:
Based on the substance's low octanol/water partition coefficient (log Kow = 1.34 at 25°C), the substance is not expected to bioaccumulate.
This is further supported by a QSAR analysis, conducted on 8 constituents of the substance, which indicated very low bioaccumulation potential for each (BCF = 3.16 L/kg).

12.4. Mobility in soil

Related to contained substances:
benzyl alcohol:
No data available

Bicyclo[2.2.1]heptanebis(methylamine):
No data available

3-aminomethyl-3,5,5-trimethylcyclohexylamine:
No data available

Poly[oPoly[oxy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-xy(methyl-1,2-ethanediyl)],
.alpha.-(2-aminomethylethyl)-.omega.-(2-aminomethylethoxy)-:
It is not necessary to perform the study because the octanol/water partition coefficient is low.

12.5. Results of PBT and vPvB assessment

Based on the available data, no PBT or vPvB substances are present in accordance with Regulation (EC) 1907/2006, annex XIII

12.6. Endocrine disrupting properties

Based on available data, there are no substances that interfere with the Endocrine System in accordance with Regulation (EU) 2017/2100

12.7. Other adverse effects

No adverse effects

SECTION 13. Disposal considerations

13.1. Waste treatment methods

In accordance with local and national regulations.
Hazardous container when empty.
Do not dispose of as household waste.
Do not mix waste from different sources during collection.

Contaminated containers:
Empty containers should be transported to an authorized site for recycling or disposal.
Dispose of uncleaned container with EER code 15.01.10*.

SECTION 14. Transport information

14.1. UN number or ID number

ADR/RID/IMDG/ICAO-IATA: 2735



ADR exemption because compliance with the following characteristics:
Combination packagings: per inner packaging 5 L per package 30 Kg
Inner packagings placed in skrink-wrapped or stretch-wrapped trays: per inner packaging 5 L per package 20 Kg

14.2. UN proper shipping name

ADR/RID/IMDG: AMMINE LIQUIDE CORROSIVE, N.A.S. o POLIAMMINE LIQUIDE CORROSIVE, N.A.S. (3-aminometil-3,5,5-trimetilcicloesilamina)
ADR/RID/IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)
ICAO-IATA: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-aminomethyl-3,5,5-trimethylcyclohexylamine)

14.3. Transport hazard class(es)

ADR/RID/IMDG/ICAO-IATA: Class : 8
ADR/RID/IMDG/ICAO-IATA: Label : Limited quantities
ADR: Tunnel restriction code : E
ADR/RID/IMDG/ICAO-IATA: Limited quantities : 5 L
IMDG - EmS : F-A, S-B

14.4. Packing group

ADR/RID/IMDG/ICAO-IATA: III

14.5. Environmental hazards

ADR/RID/ICAO-IATA: Product is environmentally hazardous
IMDG: Marine polluting agent : Not

14.6. Special precautions for user

Transportation of dangerous goods, including loading and unloading, must be carried out by persons who have received the necessary training required by modal regulations.
The transport classification(s) provided herein are for informational purposes only and based solely on the

properties of the unpackaged material as described in this MSDS. Transport classifications may vary based on mode of transport, package size, and variations in regional or national regulations.

The transport must be carried out by authorised vehicles carrying dangerous goods in accordance with the requirements of the current edition of the agreement and the provisions A.D.R national regulations.
The transport must be carried out in the original packaging and in packages that are made from materials resistant to the content and not likely to generate with this dangerous reactions. Employees to the loading and unloading of dangerous goods have received proper training on the risks presented by prepared and on possible procedures to be taken in the event of emergency situations

14.7. Maritime transport in bulk according to IMO instruments

Not applicable to the product in its supplied form.

SECTION 15. Regulatory information

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

REACH - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles (Annex XVII):
Conditions of restriction must be considered for the following items:
Number in the list: 3

REACH - List of substances of very high concern candidate for authorization (Article 59).:
Not applicable

Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer:
Not applicable

Regulation (EU) 2019/1021 on persistent organic pollutants (recast):
Not applicable

Regulation (EC) No. 649/2012 of the European Parliament and of the Council concerning the export and import of dangerous chemicals:
Not applicable

REACH - List of substances subject to authorization (Annex XIV):
Not applicable

REGULATION (EU) 2019/1148 on the marketing and use of explosives precursors:
Not applicable

International Chemical Weapons Convention (CWC) list of precursor and toxic chemicals:
Not applicable

Council Regulation (EC) No. 111/2005 laying down rules for the monitoring of trade in drug precursors between the Community and third countries:
Not applicable

Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances.
E2, ENVIRONMENTAL HAZARDS

Other Legislation:
With reference to the composition of the product, we intentionally do not add any of the substances listed in the European Directive 2011/65/EU (RoHS 2, RoHS3 and China RoHS).

Consequently, the product is in line with these directives.
We do not intentionally add Conflict minerals to the product.

Seveso category:
H1 - ACUTE TOXIC

REGULATION (EU) No 1357/2014 - waste:
HP8 - Corrosive
HP14 - Ecotoxic

Substances in the Candidate List (REACH Article 59)
Based on available data, no SVHC substances are present

15.2. Chemical safety assessment

No chemical safety assessment was carried out by the supplier

SECTION 16. Other information

16.1. Other information

Description of the hazard statements exposed to point 3
H302 = Harmful if swallowed.
H319 = Causes serious eye irritation.
H332 = Harmful if inhaled.
H317 = May cause an allergic skin reaction.
H412 = Harmful to aquatic life with long lasting effects.
H314 = Causes severe skin burns and eye damage.
H318 = Causes serious eye damage.
H400 = Very toxic to aquatic life.

Classification and procedure used to derive the classification for mixtures according to Regulation (EC) 1272/2008 [CLP]:

Classification according to Regulation (EC) Nr. 1272/2008

H302 - Harmful if swallowed. Classification procedure: Calculation method
H314 - Causes severe skin burns and eye damage. Classification procedure: Calculation method
H317 - May cause an allergic skin reaction. Classification procedure: Calculation method
H318 - Causes serious eye damage. Classification procedure: Calculation method
H411 - Toxic to aquatic life with long lasting effects. Classification procedure: Calculation method

Regulatory information:
Reg 1907/2006 EC
Reg 1272/2008 EC
Reg 878/2020 EC

Bibliographic data :
SAX 12 Ed Van Nostrand Reinhold
MERCK INDEX 15 Ed
ECHA: European Chemicals Agency (https://echa.europa.eu/it/information-on-chemicals)
OSHA: European Agency for Safety and Health at Work
IARC: International Agency for Research on Cancer
IPCS: International Programme on Chemical Safety (Cards)
NIOSH: Registry of toxic effects of chemical substances (1983)
ACGIH: American Conference of Governmental Industrial Hygienists

TOXNET: Toxicology Data Network
WHO: World Health Organization
CheLIST: Chemical Lists Information System
GESTIS: Inetrnational Limit Value (https://limitvalue.ifa.dguv.de/)

Acronyms:
- ACGIH American Conference of Governmental Industrial Hygienists
- ADR Accord 5Européen Relatif au Transport International des Marchandises Dangereuses par Route (European accord regarding international transport of dangerous goods by land)
- bw body weight
- CLP Classification, Labelling and Packaging
- CSR Chemical Safety Report
- DMEL Derived Minimal Effect Level
- DNEL Derived No Effect Level
- dw dry weight
- EC Effective Concentration
- IATA International Air Transport Association
- IMDG International Maritime Dangerous Goods
- LC Lethal Concentration
- LD Lethal Dose
- m.w. molecular weight
- PBT Persistent, Bioaccumulative and Toxic
- PNEC Predicted No Effect Concentration
- OECD Organisation / Office for Economic Co-operation and Development
- STEL Short Term Exposure Limit
- SVHC Substance of Very High Concern
- TLV Threshold Limit Value
- TWA Time Weighted Average
- vPvB very Persistent, very Bioaccumulative and toxic
- WGK Wassergefährdungsklasse (Water hazard class)

NOTICE TO USERS
The information contained in this sheet are based on the knowledge available at the date of the preparation of this sheet.
The user must be aware of the possible risks associated with the use of the product, other than that for which the product is supplied. The sheet does not exonerate the user from knowing and applying all the regulations governing its activities. The set of regulations mentioned is simply to help the user to fulfill its obligations regarding the use of hazardous products.
This sheet does not exonerate the user from other legal obligations than those mentioned and from rules regulating possession and use of the product, since the user is the only responsible.

*** This sheet supersedes all previous editions.