



RUST-OLEUM®
— INDUSTRIAL —

SAFETY DATA SHEET

5180 Epoxy Repair Mortar - hardener

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

1.1 Product identifier

Product name : 5180 Epoxy Repair Mortar - hardener
Product description : repair product
Product type : Liquid.
UFI : 5520-S0SY-200R-CTNF
Product code : RO10196

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

Identified uses	
Professional use Industrial use	
Uses advised against	Reason
Consumer use	Product is not intended for consumer use.

1.3 Details of the supplier of the safety data sheet

RUST-OLEUM EUROPE
Martin Mathys NV, Kolenbergstraat 23, B-3545 Zelem, Belgium
Telephone no.: +32 (0) 13 460 200
Fax no.: +32 (0) 13 460 201

Tor Coatings Limited
Unit 21, White Rose Way, Follingsby Park, Gateshead, Tyne & Wear, NE10 8YX United Kingdom
Telephone no.: +44 (0) 191 4106611
Fax no.: +44 (0) 191 4920125
enquiries@tor-coatings.com

e-mail address of person responsible for this SDS : rpmeurohas@rustoleum.eu

1.4 Emergency telephone number

National advisory body/Poison Centre

Telephone number Belgium : Poison centre: +32(0)70 245 245
Telephone number Bulgaria : +359 2 9154 409
Telephone number Croatia : +385 1 2348 342
Telephone number Cyprus : 1401
Telephone number Czech Republic : Toxikologické informační středisko: Na Bojišti 1, 120 00 Praha 2, tel. +420 224 919 293 nebo +420 224 915 402 (nepřetržitá lékařská služba).
Telephone number Denmark : Contact the "Giftlinien" on tel. No. 82 12 12 12 (open 24 hours a day). See point 4 on first aid.
Telephone number Estonia : 16662
Telephone number Finland : 0800 147 111
Telephone number France : ORFILA (INRS): +33 (0)1 45 42 59 59 (24/7)

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

Telephone number Greece	: Emergency Telephone Poison Center Nos. Children Aglaia Kyriakou +30 210 7793777
Telephone number Hungary	: Health Toxicology Information Service (ETTSZ) (+ 36-80) 201-199 (in case of emergency 0-24 h, can be called free of charge).
Telephone number Iceland	: +354 5432222
Telephone number Ireland	: 809 2166 Available 8am to 10pm 7 days per week
Telephone number Italy	: 800183459
Telephone number Latvia	: State Fire and Rescue Service: 112. Ltd. "Riga Eastern Clinical University Hospital", Poisoning and Drug Information Center, Hipokrāta2, Riga, Latvia, LV-1038; open 24 hours a day, tel. +371 67042473
Telephone number Lithuania	: Poison Information Office 24 hours a day: Phone: +370 (5) 2362052 (www.apsinuodijau.lt/)
Telephone number Luxembourg	: Poison centre: +32(0)70 245 245
Telephone number Malta	: 112
Telephone number Netherlands	: 088-755 8000 (Only for the purpose of informing medical personnel in case of acute intoxications)
Telephone number Norway	: +47 22 59 13 00
Telephone number Portugal	: 112 24/7, free call 800 250 250
Telephone number Romania	: +40 21 318 36 06 (Monday - Friday between 8:00 -15:00, local hour)
Telephone number Slovakia	: NATIONAL TOXICOLOGICAL INFORMATION CENTER - Non-stop 24-hour consultation in case of acute intoxication +421 2 5477 4166
Telephone number Spain	: 915 620 420
Telephone number Sweden	: Poison Information Center: 112
Telephone number Switzerland	: Swiss Toxicological Information Centre (24 h) : 145
Telephone number United Kingdom: Northern Ireland	: 809 2166 Available 8am to 10pm 7 days per week

Supplier

Telephone number Austria	: +43 13649237
Telephone number Belgium	: +32 28083237
Telephone number Bulgaria	: +359 32570104
Telephone number Croatia	: +385 17776920
Telephone number Czech Republic	: +420 228880039
Telephone number Denmark	: +45 69918573
Telephone number Estonia	: +372 6681294
Telephone number Finland	: +358 942419014
Telephone number France	: +33 975181407
Telephone number Germany	: +49 69643508409 / 0800-181-7059
Telephone number Greece	: +30 2111768478
Telephone number Hungary	: +36 18088425
Telephone number Iceland	: +354 539 0655
Telephone number Ireland	: +353 19014670
Telephone number Italy	: +39 0245557031 / 800-789-767
Telephone number Latvia	: +371 66165504
Telephone number Lithuania	: +370 52140238
Telephone number Luxembourg	: 352-20202416

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

Telephone number Netherlands : +31 858880596
 Telephone number Poland : +48 223988029
 Telephone number Portugal : +351 308801773
 Telephone number Romania : +40 37 6300026
 Telephone number Slovakia : +421 233057972
 Telephone number Slovenia : +38 618888016
 Telephone number Spain : +34 931768545
 Telephone number Sweden : +46 852503403
 Telephone number Switzerland : +41 435082011
 Hours of operation : 24 / 7

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Product definition : Mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Skin Corr. 1, H314
 Eye Dam. 1, H318
 Skin Sens. 1, H317
 Repr. 2, H361
 STOT RE 1, H372
 Aquatic Chronic 2, H411

The product is classified as hazardous according to Regulation (EC) 1272/2008 as amended.

See Section 16 for the full text of the H statements declared above.

See Section 11 for more detailed information on health effects and symptoms.

2.2 Label elements

Hazard pictograms :



Signal word : Danger

Hazard statements : H314 - Causes severe skin burns and eye damage.
 H317 - May cause an allergic skin reaction.
 H361 - Suspected of damaging fertility or the unborn child.
 H372 - Causes damage to organs through prolonged or repeated exposure.
 H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

General : Not applicable.

Prevention : P201 - Obtain special instructions before use.
 P280 - Wear protective gloves, protective clothing and eye or face protection.
 P273 - Avoid release to the environment.
 P260 - Do not breathe vapour.

Response : P391 - Collect spillage.
 P308 + P313 - IF exposed or concerned: Get medical advice or attention.
 P301 + P310 - IF SWALLOWED: Immediately call a POISON CENTER or doctor.
 P303 + P361 + P353, P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water. Immediately call a POISON CENTER or doctor.
 P305 + P351 + P338, P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.

Storage : P405 - Store locked up.

SECTION 2: Hazards identification

Disposal	: P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.
Hazardous ingredients	: ☒ Fatty acids, tall oil, reaction products with tetraethylenepentamine Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols 2-piperazin-1-ylethylamine tetraethylenepentamine
Supplemental label elements	: ☒ Not applicable.
Supplemental label elements : Detergents - Regulation (EC) No 907/2006	: Not applicable.
Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles	: Not applicable.
Special packaging requirements	
Containers to be fitted with child-resistant fastenings	: Not applicable.
Tactile warning of danger	: Not applicable.

2.3 Other hazards

Product meets the criteria for PBT or vPvB according to Regulation (EC) No. 1907/2006, Annex XIII	
This mixture does not contain any substances that are assessed to be a PBT or a vPvB.	
Product meets the criteria for endocrine disrupting properties according to Regulation (EC) No. 1907/2006.	: ☒ Not applicable
Other hazards which do not result in classification	: None known.

SECTION 3: Composition/information on ingredients

3.2 Mixtures	: Mixture
Europe	

Product/ingredient name	Identifiers	%	Classification	Specific Conc. Limits, M-factors and ATEs	Type
☒ Fatty acids, tall oil, reaction products with tetraethylenepentamine	EC: 273-201-6 CAS: 68953-36-6	≥50 - ≤75	Skin Sens. 1, H317 Aquatic Chronic 2, H411	-	[1]
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	REACH #: 01-2119980970-27 List #: 701-443-9	≥10 - ≤25	Skin Irrit. 2, H315 Skin Sens. 1A, H317 Aquatic Chronic 2, H411	-	[1]
2-piperazin-1-ylethylamine	REACH #: 01-2119471486-30 EC: 205-411-0 CAS: 140-31-8	≥10 - ≤25	Acute Tox. 4, H302 Acute Tox. 3, H311 Skin Corr. 1B, H314 Eye Dam. 1, H318	ATE [Oral] = 1470 mg/kg ATE [Dermal] = 866 mg/kg	[1]

SECTION 3: Composition/information on ingredients

tetraethylenepentamine	Index: 205-411-0 REACH #: 01-2119487290-37 EC: 203-986-2 CAS: 112-57-2 Index: 612-060-00-0	≤3	Skin Sens. 1, H317 Repr. 2, H361 STOT RE 1, H372 Aquatic Chronic 3, H412 Acute Tox. 4, H302 Acute Tox. 4, H312 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 Aquatic Chronic 2, H411 See Section 16 for the full text of the H statements declared above.	ATE [Oral] = 500 mg/kg ATE [Dermal] = 1100 mg/kg	[1]
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There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment, are PBTs, vPvBs or Substances of equivalent concern, or have been assigned a workplace exposure limit and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Type

 Substance classified with a health or environmental hazard

List numbers have no legal significance.

Occupational exposure limits, if available, are listed in Section 8.

SECTION 4: First aid measures**4.1 Description of first aid measures**

- Eye contact** : Get medical attention immediately. Call a poison center or physician. Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician.
- Inhalation** : Get medical attention immediately. Call a poison center or physician. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Skin contact** : Get medical attention immediately. Call a poison center or physician. Wash with plenty of soap and water. Remove contaminated clothing and shoes. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 10 minutes. Chemical burns must be treated promptly by a physician. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.
- Ingestion** : Get medical attention immediately. Call a poison center or physician. Wash out mouth with water. Remove dentures if any. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Chemical burns must be treated promptly by a physician. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or

SECTION 4: First aid measures

waistband.

- Protection of first-aiders** : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

4.2 Most important symptoms and effects, both acute and delayed

Over-exposure signs/symptoms

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

4.3 Indication of any immediate medical attention and special treatment needed

- Notes to physician** : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
- Specific treatments** : No specific treatment.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media** : Use an extinguishing agent suitable for the surrounding fire.
- Unsuitable extinguishing media** : None known.

5.2 Special hazards arising from the substance or mixture

- Hazards from the substance or mixture** : In a fire or if heated, a pressure increase will occur and the container may burst. This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.
- Hazardous combustion products** : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
metal oxide/oxides

5.3 Advice for firefighters

SECTION 5: Firefighting measures

- Special protective actions for fire-fighters** : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.
- Special protective equipment for fire-fighters** : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- For non-emergency personnel** : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Do not breathe vapour or mist. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.
- For emergency responders** : If specialised clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

6.2 Environmental precautions

- : Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

6.3 Methods and material for containment and cleaning up

- Small spill** :  Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
- Large spill** : Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Wash spillages into an effluent treatment plant or proceed as follows. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilt product. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations.

6.4 Reference to other sections

- : See Section 1 for emergency contact information.
See Section 8 for information on appropriate personal protective equipment.
See Section 13 for additional waste treatment information.

SECTION 7: Handling and storage

The information in this section contains generic advice and guidance.

7.1 Precautions for safe handling

- Protective measures** : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not breathe vapour or mist. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Keep away from acids. Empty containers retain product residue and can be hazardous. Do not reuse container.

SECTION 7: Handling and storage**Advice on general occupational hygiene**

: Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

7.2 Conditions for safe storage, including any incompatibilities

Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Separate from acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Seveso Directive - Reporting thresholds**Danger criteria**

Category	Notification and MAPP threshold	Safety report threshold
 2	200 tonnes	500 tonnes

7.3 Specific end use(s)

Recommendations : Not available.

Industrial sector specific solutions : Not available.

SECTION 8: Exposure controls/personal protection

The information in this section contains generic advice and guidance. Information is provided based on typical anticipated uses of the product. Additional measures might be required for bulk handling or other uses that could significantly increase worker exposure or environmental releases.

8.1 Control parameters**Occupational exposure limits / Biological exposure indices**

No exposure limit value known.

No exposure indices known.

Recommended monitoring procedures : Reference should be made to monitoring standards, such as the following:
European Standard EN 689 (Workplace atmospheres - Guidance for the assessment of exposure by inhalation to chemical agents for comparison with limit values and measurement strategy) European Standard EN 14042 (Workplace atmospheres - Guide for the application and use of procedures for the assessment of exposure to chemical and biological agents) European Standard EN 482 (Workplace atmospheres - General requirements for the performance of procedures for the measurement of chemical agents) Reference to national guidance documents for methods for the determination of hazardous substances will also be required.

DNELs/DMELs

Product/ingredient name	Result	Value	Effects
 Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	DNEL - Workers - Long term - Oral	1,21 mg/m ³	<u>Effects</u> : Systemic
2-piperazin-1-ylethylamine	DNEL - Workers - Long term - Inhalation	15 µg/m ³	<u>Effects</u> : Local
	DNEL - Workers - Short term - Inhalation	80 µg/m ³	<u>Effects</u> : Local
	DNEL - Workers - Long term -	3,33 mg/kg bw/	<u>Effects</u> :

SECTION 8: Exposure controls/personal protection

	Dermal	day	Systemic
	DNEL - Workers - Short term - Inhalation	10,6 mg/m ³	Effects: Systemic
	DNEL - Workers - Long term - Inhalation	10,6 mg/m ³	Effects: Systemic

PNECs

Not available.

8.2 Exposure controls

Appropriate engineering controls

- : If user operations generate dust, fumes, gas, vapour or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Individual protection measures

Hygiene measures

- : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection

- : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. Use eye protection according to EN 166. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles and/or face shield. If inhalation hazards exist, a full-face respirator may be required instead.

Skin protection

There is no one glove material or combination of materials that will give unlimited resistance to any individual or combination of chemicals.

The breakthrough time must be greater than the end use time of the product.

The instructions and information provided by the glove manufacturer on use, storage, maintenance and replacement must be followed.

Gloves should be replaced regularly and if there is any sign of damage to the glove material.

Always ensure that gloves are free from defects and that they are stored and used correctly.

The performance or effectiveness of the glove may be reduced by physical/chemical damage and poor maintenance. Barrier creams may help to protect the exposed areas of the skin but should not be applied once exposure has occurred.

Hand protection

- : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated. > 8 hours (breakthrough time): nitrile rubber

The recommendation for the type or types of glove to use when handling this product is based on information from the following source: EN374. The user must check that the final choice of type of glove selected for handling this product is the most appropriate and takes into account the particular conditions of use, as included in the user's risk assessment.

Body protection

- : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: (EN 467) Overalls buttoned to the neck and wrist.

SECTION 8: Exposure controls/personal protection

- Other skin protection** : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.
- Respiratory protection** : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use. Recommended: organic vapour (Type A) and particulate filter (EN 141)
- Environmental exposure controls** : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

SECTION 9: Physical and chemical properties

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

9.1 Information on basic physical and chemical properties

- Physical state** : Liquid.
- Colour** : Grey.
- Odour** : Ammoniacal.
- Odour threshold** : Not available.
- Melting point/freezing point** : ☒ Not applicable.
- Initial boiling point and boiling range** : ☒ 220°C (428°F) [Literature 2-piperazin-1-ylethylamine]
- Flammability (solid, gas)** : Not available.
- Lower and upper explosion limit** : ☒ Does not contain sufficient volatile flammable components to form an explosive atmosphere under normal conditions of use.
- Flash point** : ☒ Closed cup: 93°C (199,4°F) [Literature 2-piperazin-1-ylethylamine]
- Auto-ignition temperature** : ☒ 300°C (>572°F) [Literature 2-piperazin-1-ylethylamine]
- Decomposition temperature** : ☒ Not applicable.
- pH** : ☒ 11 [Conc. (% w/w): 100%] [Literature]
- pH : Justification** : Not available.
- Viscosity** : Dynamic (room temperature): >450 mPa·s [Literature]
Kinematic (room temperature): >419 mm²/s [calculated.]
Kinematic (40°C): >20,5 mm²/s [calculated.]
- Solubility(ies)** :

Media	Result
cold water	Not soluble
hot water	Not soluble

- Solubility in water** : Not available.
- Miscible with water** : No.
- Partition coefficient: n-octanol/ water** : Not applicable.
- Vapour pressure** : ☒ 0,0052 kPa (0,039 mm Hg) [2-piperazin-1-ylethylamine]
- Evaporation rate** : Not available.
- Relative density** : Not available.
- Density** : 1,074 g/cm³ [20°C (68°F)] [DIN 53217]
- Vapour density** : Not available.
- Explosive properties** : Not available.
- Oxidising properties** : Not available.
- Particle characteristics**

SECTION 9: Physical and chemical properties

Median particle size

: Not applicable.

SECTION 10: Stability and reactivity

10.1 Reactivity

: No specific test data related to reactivity available for this product or its ingredients.

10.2 Chemical stability

: The product is stable.

10.3 Possibility of hazardous reactions

: Under normal conditions of storage and use, hazardous reactions will not occur.

10.4 Conditions to avoid

: No specific data.

10.5 Incompatible materials

: Reactive or incompatible with the following materials:
acids

10.6 Hazardous decomposition products

: Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

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

Acute toxicity

Product/ingredient name	Result	Value
2-piperazin-1-ylethylamine	Rabbit - Dermal - LD50	880 ul/kg
	Rat - Oral - LD50	1470 mg/kg
	Rat - Dermal - LD50	866 mg/kg
	Rat - Oral - LD50	2140 mg/kg
tetraethylenepentamine		

Conclusion/Summary [Product]

: Based on available data, the classification criteria are not met.

Acute toxicity estimates

Product/ingredient name	Oral (mg/kg)	Dermal (mg/kg)	Inhalation (gases) (ppm)	Inhalation (vapours) (mg/l)	Inhalation (dusts and mists) (mg/l)
5180 Epoxy Repair Mortar - hardener	8658,8	6733,2	N/A	N/A	N/A
2-piperazin-1-ylethylamine	1470	866	N/A	N/A	N/A
tetraethylenepentamine	500	1100	N/A	N/A	N/A

Skin corrosion/irritation

Product/ingredient name	Result	Exposure	Observation
Reaction mass of (1-phenylethyl) phenols and bis-(1-phenylethyl) phenols	Rabbit - Skin - Irritant	-	-
2-piperazin-1-ylethylamine	Rabbit - Skin - Severe irritant	Amount/concentration applied: 5 mg	-
tetraethylenepentamine	Rabbit - Skin - Severe irritant	Amount/concentration applied: 5 mg	-

SECTION 11: Toxicological information

	Rabbit - Skin - Severe irritant	Amount/concentration applied: 495 mg	-
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Conclusion/Summary [Product] : Causes severe skin burns and eye damage.

Serious eye damage/eye irritation

Product/ingredient name	Result	Exposure	Observation
2-piperazin-1-ylethylamine	Rabbit - Eyes - Moderate irritant	Amount/concentration applied: 20 mg	-
tetraethylenepentamine	Rabbit - Eyes - Moderate irritant	Amount/concentration applied: 100 mg	-
	Rabbit - Eyes - Moderate irritant	Amount/concentration applied: 5 mg	-

Conclusion/Summary [Product] : Causes serious eye damage.

Respiratory corrosion/irritation

Not available.

Conclusion/Summary [Product] : Causes damage to organs through prolonged or repeated exposure.

Respiratory or skin sensitization

Not available.

Skin

Conclusion/Summary [Product] : May cause an allergic skin reaction.

Respiratory

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Germ cell mutagenicity

Not available.

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Carcinogenicity

Not available.

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

Reproductive toxicity

Not available.

Conclusion/Summary [Product] : Suspected of damaging fertility or the unborn child.

SECTION 11: Toxicological information

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Product/ingredient name

2-piperazin-1-ylethylamine

Result

STOT RE 1, H372

Aspiration hazard

Not available.

Information on likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

- Eye contact** : Causes serious eye damage.
- Inhalation** : No known significant effects or critical hazards.
- Skin contact** : Causes severe burns. May cause an allergic skin reaction.
- Ingestion** : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

- Eye contact** : Adverse symptoms may include the following:
pain
watering
redness
- Inhalation** : Adverse symptoms may include the following:
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Skin contact** : Adverse symptoms may include the following:
pain or irritation
redness
blistering may occur
reduced foetal weight
increase in foetal deaths
skeletal malformations
- Ingestion** : Adverse symptoms may include the following:
stomach pains
reduced foetal weight
increase in foetal deaths
skeletal malformations

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

Short term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Long term exposure

- Potential immediate effects** : Not available.
- Potential delayed effects** : Not available.

Potential chronic health effects

Not available.

Conclusion/Summary [Product] : Based on available data, the classification criteria are not met.

General : Causes damage to organs through prolonged or repeated exposure. Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

SECTION 11: Toxicological information

Carcinogenicity : No known significant effects or critical hazards.
Mutagenicity : No known significant effects or critical hazards.
Reproductive toxicity : Suspected of damaging fertility or the unborn child.

11.2 Information on other hazards

11.2.1 Endocrine disrupting properties

Not available.
Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

11.2.2 Other information

Not available.

SECTION 12: Ecological information

12.1 Toxicity

Product/ingredient name	Result	Species
2-piperazin-1-ylethylamine	Acute - LC50 - Fresh water 2190 mg/l [96 hours]	Fish - Fathead minnow

Conclusion/Summary [Product] : Toxic to aquatic life with long lasting effects.

12.2 Persistence and degradability

Not available.

Conclusion/Summary [Product] : This product has not been tested for biodegradation. Based on available data, the classification criteria are not met.

12.3 Bioaccumulative potential

Product/ingredient name	LogP _{ow}	BCF	Potential
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	3,67	-	Low
2-piperazin-1-ylethylamine	-1,48	-	Low

12.4 Mobility in soil

Soil/water partition coefficient

Product/ingredient name	logK _{oc}	K _{oc}
2-piperazin-1-ylethylamine	1,5	33,6814
tetraethylenepentamine	1	10,5872

Results of PMT and vPvM assessment

Product/ingredient name	PMT	P	M	T	vPvM	vP	vM
Fatty acids, tall oil, reaction products with tetraethylenepentamine	No	No	No	No	No	No	No
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	No	No	No	No	No	No	No
2-piperazin-1-ylethylamine	No	No	No	No	No	No	No
tetraethylenepentamine	No	No	No	No	No	No	No

Mobility : Non-volatile.

Conclusion/Summary : The product does not meet the criteria to be considered as a PMT or vPvM.

SECTION 12: Ecological information

12.5 Results of PBT and vPvB assessment

Regulation (EC) No. 1907/2006 [REACH]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Fatty acids, tall oil, reaction products with tetraethylenepentamine	No	N/A	N/A	No	N/A	N/A	N/A
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	No	N/A	N/A	No	N/A	N/A	N/A
2-piperazin-1-ylethylamine	N/A	N/A	N/A	Yes	N/A	N/A	N/A
tetraethylenepentamine	No	N/A	N/A	No	N/A	N/A	N/A

Regulation (EC) No. 1272/2008 [CLP]

Product/ingredient name	PBT	P	B	T	vPvB	vP	vB
Fatty acids, tall oil, reaction products with tetraethylenepentamine	No	No	No	No	No	No	No
Reaction mass of (1-phenylethyl)phenols and bis-(1-phenylethyl)phenols	No	No	No	No	No	No	No
2-piperazin-1-ylethylamine	No	No	No	No	No	No	No
tetraethylenepentamine	No	No	No	No	No	No	No

Conclusion/Summary : The product does not meet the criteria to be considered as a PBT or vPvB.

Regulation (EC) No. 1272/2008 [CLP]

12.6 Endocrine disrupting properties

Not available.

Conclusion/Summary [Product] : The product does not meet the criteria to be considered as having endocrine disrupting properties according to the criteria set out in either Regulation (EC) No. 1907/2006 or Regulation (EC) No 1272/2008.

12.7 Other adverse effects

No known significant effects or critical hazards.

SECTION 13: Disposal considerations

The information in this section contains generic advice and guidance.

13.1 Waste treatment methods

Product

Methods of disposal : The generation of waste should be avoided or minimised wherever possible. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction.

Hazardous waste : Yes.

European waste catalogue (EWC)

Waste code	Waste designation
20 01 27*	paint, inks, adhesives and resins containing hazardous substances

SECTION 13: Disposal considerations

Special precautions : This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

SECTION 14: Transport information

	ADR/RID	ADN	IMDG	IATA
14.1 UN number or ID number	UN2735	UN2735	UN2735	UN2735
14.2 UN proper shipping name	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine)	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine). Marine pollutant	POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine)
14.3 Transport hazard class(es)	8  	8  	8  	8 
14.4 Packing group	III	III	III	III
14.5 Environmental hazards	Yes.	Yes.	Yes.	Yes. The environmentally hazardous substance mark is not required.

Additional information ADR

The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Limited quantity : 5L
Transport Category : 3
Hazard identification number : 80
Classification code : C7
ADR Label Model Number : 8
Excepted Quantity : E1
Tunnel code : (E)
Packing instructions : P001, IBC03, LP01, R001
Mixed Packing Provisions : MP19
Special provisions : 274

Additional information ADN

The environmentally hazardous substance mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Limited quantity : 5L
Classification code : C7
Special provisions : 274

Additional information IMDG

The marine pollutant mark is not required when transported in sizes of ≤5 L or ≤5 kg.

Limited quantity : 5L
Emergency schedules : F-A, S-B

SECTION 14: Transport information

Segregation Group : SGG18 - Alkalis
Segregation code : SG35 - Stow "separated from" SGG1 – acids.
Special provisions : 223, 274

Additional information IATA

The environmentally hazardous substance mark may appear if required by other transportation regulations.

Passenger and Cargo Aircraft : Quantity limitation 5L Packaging instruction 852
Cargo aircraft : Quantity limitation 60L Packaging instruction 856
Limited Quantities - Passenger Aircraft : Quantity limitation 1L Packaging instruction Y841
Special provisions : A3, A803

14.6 Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

14.7 Maritime transport in bulk according to IMO instruments : Not available.

SECTION 15: Regulatory information**15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture****EU Regulation (EC) No. 1907/2006 (REACH)****Annex XIV - List of substances subject to authorisation****Annex XIV**

None of the components are listed.

Substances of very high concern

None of the components are listed.

Annex XVII - Restrictions on the manufacture, placing on the market and use of certain dangerous substances, mixtures and articles

Product/ingredient name	%	Designation [Usage]
5180 Epoxy Repair Mortar - hardener	≥90	3

Labelling : Not applicable.

Synthetic polymer microparticles - Designation 78

Generic identity of polymer(s) : Not applicable.

Total percentage of synthetic polymer microparticles : Not applicable.

Other EU regulations

VOC for Ready-for-Use Mixture : Exempt

Industrial emissions (integrated pollution prevention and control) - Air : Not listed

SECTION 15: Regulatory information

Industrial emissions : Not listed

(integrated pollution prevention and control) - Water

Explosive precursors : Not applicable.

Ozone depleting substances (EU 2024/590)

Not listed.

Prior Informed Consent (PIC) (649/2012/EC)

Not listed.

Persistent Organic Pollutants (850/2004/EC)

Not listed.

Seveso Directive

This product is controlled under the Seveso Directive.

Danger criteria

Category
E2

National regulations

Austria

VbF class : ☒ Not applicable

Storage code : LGK 8B

Classification, packaging and labelling : Not available.

Limitation of the use of organic solvents : Permitted.

Waste catalogue : 55907

References : Federal Law Gazette Nr. 240/1991 - Regulation on Combustible liquids - Warning Classes
Ministry of the Economy and Labor 2003 - GKV 2003 - Decree 429/2011
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Belgium

Book VI carcinogenic agents annex VI.2-1 - VI.2-3

Ingredient name	Status
Silice	Listed

References : Royal Decree of 2 December 1993 concerning the protection of workers against the risks related to exposure to carcinogens and mutagens at work
Royal Decree 374/2001, protection of the health and safety of workers from the risks related to chemical agents at work
Royal Decree of 17 May 2007, amending the Royal Decree of 11 March 2002 relating to the protection of the health and the safety of workers against the risks related to chemical agents in the workplace, Belgium State Gazette 2007-2327 of 7 June 2007.
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

SECTION 15: Regulatory information

Bulgaria

References

- : Ordinance No. 9 of 4 August 2006 on the protection of workers from the risks related to exposure to asbestos at work
- Ordinance No. 13 of 30 December 2003 on the protection of workers from the risks related to exposure to chemical agents at work
- Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
- REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Croatia

References

- : Regulation about Maximum Exposure Limits of harmful substances in the atmosphere of the working environment NN 92/93
- Regulation about application of personal safety equipment NN 39/06
- Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
- REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Cyprus

References

- : -

Czech Republic

Storage code

- : IV

References

- : Decree of the government no. 441/2004 Sb., which amends Decree of the government no. 178/2001 Sb., which implements the health and safety at work conditions, according to the Decree of the government no. 523/2002 Sb.
- Decree of the government no. 194/2001 Sb., which implements the technical requirements for aerosol dispensers
- EC Regulation 1907/2006 (REACH), EC Regulation 1272/2008 (CLP), EC Regulation 648/2004 on detergents, Act No. 350/2011 Coll. on chemical substances and chemical mixtures, Act No. 185/2001 Coll. on waste, Decree No. 381/2001 Coll., Catalog of waste, Decree No. 383/2001 Coll., on details of waste management, Act No. 258/2000 Coll. on public health, Government Regulation No. 361/2007 Coll., establishing the conditions for health protection at work, Act No. 201/2012 Coll., on air protection and related decrees, Act No. 477/2001 Coll. on packaging, Decree No. 48/1982 Coll., which establishes basic requirements to ensure the safety of work and technical equipment, communication No. 8/2013 Coll. m.s. (ADR), notice No. 23/2013 Coll. (RID), Czech state standards
- REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Denmark

Executive Order No. 1795/2015

Ingredient name	Annex I Section A	Annex I Section B
Titanium dioxide	Listed	-

Product registration number : 4038314

Fire class : -1

Denmark – Cancer risks : Listed

MAL-code : 00-6

SECTION 15: Regulatory information

Protection based on MAL : According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:

General: Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving spattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 00-6
Application: When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new* booths and cabins with non-atomizing guns. During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents. During non-atomising spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Protective clothing must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone.

- Air-supplied full mask and protective clothing must be worn.

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied full mask, protective clothing and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

MAL-code for ready-for-use mixture : 00-5

SECTION 15: Regulatory information

Protection based on MAL for ready-for-use mixture : According to the regulations on work involving coded products, the following stipulations apply to the use of personal protective equipment:

General: Gloves must be worn for all work that may result in soiling. Apron/coveralls/protective clothing must be worn when soiling is so great that regular work clothes do not adequately protect skin against contact with the product. A face shield must be worn in work involving splattering if a full mask is not required. In this case, other recommended use of eye protection is not required.

In all spraying operations in which there is return spray, the following must be worn: respiratory protection and arm protectors/apron/coveralls/protective clothing as appropriate or as instructed.

MAL-code: 00-5

Application: When using scraper or knife, brush, roller etc. for pre- and post-treatments in a spray booth where the operator is outside the spray zone and when working in similar new* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When spraying in new* booths and cabins with non-atomizing guns. During downtimes, cleaning and repair in closed facilities, spray booths or cabins, if there is a risk of contact with wet paint or organic solvents. During non-atomising spraying in existing* facilities of the combined-cabin, spray-cabin and spray-booth type where the operator is working inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments in cabins or booths of the existing* facility type, if the operator is inside the spray zone. When using scraper or knife, brush, roller, etc. for pre- and post-treatments outside a closed facility, spray booth or spray cabin.

- Protective clothing must be worn.

When spraying in existing* spray booths, if the operator is outside the spray zone.

- Air-supplied full mask and protective clothing must be worn.

During all spraying where atomisation occurs in cabins or spray booths where the operator is inside the spray zone and during spraying outside a closed facility, cabin or booth.

- Air-supplied full mask, protective clothing and hood must be worn.

Drying: Items for drying/drying ovens that are temporarily placed on such things as rack trolleys, etc, must be equipped with a mechanical exhaust system to prevent fumes from wet items from passing through workers' inhalation zone.

Polishing: When polishing treated surfaces, a mask with dust filter must be worn. When machine grinding, eye protection must be worn. Work gloves must always be worn.

Caution The regulations contain other stipulations in addition to the above.

*See Regulations.

Low-boiling liquids	: Not applicable.
Restrictions on use	: Not to be used by professional users below 18 years of age. See the National Working Environment Authorities Executive Order regarding Young People At Work.
List of undesirable substances	: Not listed

SECTION 15: Regulatory information

Carcinogenic waste	: Waste containers must be labeled: Contains a substance or substances regulated by Danish working environment legislation on cancer risks.
Waste card number	: 05.99
Waste group	: H
Remark	: Not available.
References	: Executive Order no. 301 of 13 May 1993 "Executive order on the determination of code numbers". (MAL code) Executive Order no. 302 of 13 May 1993 "Executive Order on work with products with code numbers". (MAL code) Executive Order no. 559 of 4 July 2002 "Executive Order on special duties for manufacturers, suppliers and importers etc. of substances and materials according to the law on the working environment". Executive Order no. 908 of 27 September 2005 "Executive Order on measures for prevention of cancer risk when working with substances and materials". Executive Order no. 239 of 6 April 2005 "Executive Order on young people's work". Danish Working Environment Authority Guidance No. C.0.1. of August 2007 "Trace limit value list for substances and materials". Executive Order no. 571 of 29 November 1984 "Executive Order on use of propellants and solvents in aerosol containers". Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878 REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Estonia

References	: Regulation of the Estonian Government of 02.02.2000 No. 32 Occupational health and occupational safety requirements for asbestos. Regulation of the Estonian Government of 15.12.2005 No. 309 Occupational health and occupational safety requirements for carcinogenic and mutagenic substances. Regulation of the Estonian Government of 18.09.2001 No. 293 Occupational exposure limits of chemicals. Regulation of the Estonian Government of 20.03.2001 No. 105 Occupational health and occupational safety requirements for handling dangerous chemicals and materials. Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878 REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC
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Finland

NACE	: Not available.
UC62	: Not available.
References	: Regulation of the Ministry of Social Affairs and Health on occupational exposure limit values 795/2007 Aerosol regulation amendment 805/1994 Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878 REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

France

Social Security Code, Articles L 461-1 to L 461-7	: 2-piperazin-1-ylethylamine	RG 49)
Classified installations for environmental protection	: Not available.	

SECTION 15: Regulatory information

- Reinforced medical surveillance** : Decree n ° 2012-135 of January 30, 2012 relating to the organization of occupational medicine: not applicable
- Remark** : Not available.
- References** : Tables of anticipated professional diseases according to article R461-3 of the labour code
Labour code: Regulatory and recommended occupational exposure limits: Art. R231-55 to Art. R231-55-3.
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Germany

Storage class (TRGS 510) : 8B

Hazardous incident ordinance

This product is controlled under the Germany Hazardous Incident Ordinance.

Named substances

Name	Reference number

Danger criteria

Category	Reference number
E2	1.3.2

Hazard class for water : 2

Technical instruction on air quality control (TA Luft)

Number [Class]	Description
5.2.1	Total dust
5.2.5	Organic substances
5.2.5 [I]	Organic substances

AOX : Not available.

- References** : Regulation on the restrictions on the marketing and use of certain dangerous substances, preparations and articles according to the Chemicals Law
Technical Rules for Hazardous Substances (TRGS): Occupational Exposure Limits (TRGS 900)
Technical Rules for Hazardous Substances (TRGS): Directory of carcinogenic, mutagenic and reprotoxic substances (TRGS 905)
First General Administrative Regulation Pertaining to the Federal Immission Control Act (Technical Instructions on Air Quality Control – TA Luft)
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Greece

- References** : Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878

Hungary

SECTION 15: Regulatory information

- References** :
- Decree No. 44/2000 (XII.27.) EüM of the Ministry of Health on detailed arrangements for certain procedures, activities relating to dangerous substances and dangerous preparations plus amendments
 - Decree No. 25/2000 (IX.30.) EüM of the Ministry of Health on chemical safety at work plus amendments
 - Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
 - REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Ireland

- References** :
- Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001 (S.I. No. 619 of 2001)
 - Safety, Health and Welfare at Work (Carcinogens) Regulations 2001 (S.I. No. 78 of 2001)
 - Safety, Health and Welfare at Work (General Application) Regulations 2007
 - Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
 - REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Italy

- D.Lgs. 152/06** :
- Not determined.
- References** :
- Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878

Latvia

- References** :
- Regulation of Cabinet of Ministers No. 325 of 15 May 2007 "Labour protection requirements for contact with chemical substances in the workplace"
 - Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
 - REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Lithuania

- References** :
- Regulation about application of personal safety equipment NN 39/06
 - Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
 - REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Luxembourg

- References** : -

Malta

- References** : -

Netherlands

- Water Discharge Policy (ABM)** :
- A(2) Toxic for aquatic organisms, may have long-term hazardous effects in aquatic environment. Decontamination effort: A

- Remark** :
- Not available.

- References** :
- Water Discharge Policy (ABM)
 - Netherlands Emission Guidelines for Air (NeR)
 - List of carcinogenic substances and processes according to article 4.11 of the Working Conditions Act; Health and Safety Act
 - List of mutagenic substances and processes according to article 4.11 of the Working Conditions Act; Health and Safety Act
 - Non-limited list of reprotoxic substances (with additional registration requirement) according to article 4..2a(2) of the Working Conditions Act; Health and Safety Act
 - Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by

SECTION 15: Regulatory information

Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Poland

References

- : Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Portugal

References

- : Occupational Health and Safety. Professional exposure limit values for chemical agents (NP 1796 2007)
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Romania

References

- : Order 595-2002 approving technical Regulations regarding spray aerosol containers
Governmental Decision 1218-2006 on establishing the minimum requirements of labour safety and health for ensuring the protection of workers against risks connected to the presence of chemical agents
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Slovakia

References

- : Government regulation no. 45/2002 Consolidated to 16 January 2002 on the protection of health at work from chemical agents
Government Regulation 301/2007 on the protection of workers from risks associated with exposure to carcinogenic and mutagenic factors
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Slovenia

References

- : Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Spain

References

- : Royal Decree 374/2001, protection of the health and safety of workers from the risks related to chemical agents at work
ROYAL DECREE 2549/1994. Regulation on aerosol dispensers
Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC

Sweden

Ordinance on Thermoset Plastics

- : Not applicable.

Thermoset plastic waste

- : Not available.

SECTION 15: Regulatory information**Waste group** : 20 01 27***Flammable liquid class** : 
(SRVFS 2005:10)**References** : Conforms to Regulation (EC) No. 1907/2006 (REACH), Annex II, as amended by Regulation (EU) No. 2020/878
REGULATION (EU) 2016/425 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 9 March 2016 on personal protective equipment and repealing Council Directive 89/686/EEC**International regulations****Stockholm Convention on Persistent Organic Pollutants**

List name	Ingredient name	Status
Not listed.		

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

List name	Ingredient name	Status
Not listed.		

CN code : 3214 10 10 00**Inventory list**

- Australia** : All components are listed or exempted.
- Canada** : At least one component is not listed in DSL but all such components are listed in NDSL.
- China** : All components are listed or exempted.
- Eurasian Economic Union** : **Russian Federation inventory**: Not determined.
- Japan** : **Japan inventory (CSCL)**: All components are listed or exempted.
Japan inventory (ISHL): Not determined.
- New Zealand** : All components are listed or exempted.
- Philippines** : All components are listed or exempted.
- Republic of Korea** : All components are listed or exempted.
- Taiwan** : All components are listed or exempted.
- Thailand** :  All components are listed or exempted.
- Turkey** : Not determined.
- United States** : Not determined.
- Viet Nam** : Not determined.

15.2 Chemical safety assessment : This product contains substances for which Chemical Safety Assessments are still required.**SECTION 16: Other information** Indicates information that has changed from previously issued version.

Abbreviations and acronyms : ATE = Acute Toxicity Estimate
CLP = Classification, Labelling and Packaging Regulation [Regulation (EC) No. 1272/2008]
DMEL = Derived Minimal Effect Level
DNEL = Derived No Effect Level
EUH statement = CLP-specific Hazard statement
N/A = Not available
PBT = Persistent, Bioaccumulative and Toxic
PNEC = Predicted No Effect Concentration
RRN = REACH Registration Number
SGG = Segregation Group

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vPvB = Very Persistent and Very Bioaccumulative

Procedure used to derive the classification according to Regulation (EC) No. 1272/2008 [CLP/GHS]

Classification	Justification
Skin Corr. 1, H314	On basis of test data
Eye Dam. 1, H318	On basis of test data
Skin Sens. 1, H317	Calculation method
Repr. 2, H361	Calculation method
STOT RE 1, H372	Calculation method
Aquatic Chronic 2, H411	Calculation method

Full text of abbreviated H statements

Europe

Full text of abbreviated H statements	:	H302	Harmful if swallowed.
		H311	Toxic in contact with skin.
		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.
		H361	Suspected of damaging fertility or the unborn child.
		H372	Causes damage to organs through prolonged or repeated exposure.
		H411	Toxic to aquatic life with long lasting effects.
		H412	Harmful to aquatic life with long lasting effects.

Full text of classifications [CLP/GHS]	:	Acute Tox. 3	ACUTE TOXICITY - Category 3
		Acute Tox. 4	ACUTE TOXICITY - Category 4
		Aquatic Chronic 2	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 2
		Aquatic Chronic 3	LONG-TERM (CHRONIC) AQUATIC HAZARD - Category 3
		Eye Dam. 1	SERIOUS EYE DAMAGE/EYE IRRITATION - Category 1
		Repr. 2	REPRODUCTIVE TOXICITY - Category 2
		Skin Corr. 1	SKIN CORROSION/IRRITATION - Category 1
		Skin Corr. 1B	SKIN CORROSION/IRRITATION - Category 1B
		Skin Irrit. 2	SKIN CORROSION/IRRITATION - Category 2
		Skin Sens. 1	SKIN SENSITISATION - Category 1
		Skin Sens. 1A	SKIN SENSITISATION - Category 1A
		STOT RE 1	SPECIFIC TARGET ORGAN TOXICITY - REPEATED EXPOSURE - Category 1

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Notice to reader

IMPORTANT NOTE: The information in this Safety Data Sheet is based on the present state of knowledge and current legislation. It provides guidance on health, safety and environmental aspects of the product and should not be construed as any guarantee of technical performance or suitability for particular applications. The information contained in this data sheet (as may be amended from time to time) is not intended to be exhaustive and is presented in good faith and believed to be correct as of the date on which it is prepared. It is the user's responsibility to verify that this data sheet is current prior to using the product to which it relates. Persons using the information must make their own determinations as to the suitability of the relevant product for their purposes prior to use. Where those purposes are other than as specifically recommended in this safety data sheet, then the user uses the product at their own risk.

MANUFACTURER'S DISCLAIMER: the conditions, methods and factors affecting the handling, storage, application, use and disposal of the product are not under the control and knowledge of the manufacturer. Therefore the manufacturer does not assume responsibility for any adverse events which may occur in the

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handling, storage, application, use, misuse or disposal of the product and, so far as permitted by applicable law, the manufacturer expressly disclaims liability for any and all loss, damages and/or expenses arising out of or in any way connected to the storage, handling, use or disposal of the product. Safe handling, storage, use and disposal are the responsibility of the users. Users must comply with all applicable health and safety laws.

Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.