

Safety Data Sheet

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

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

1.1. Product identifier

Product name **Permabond ET5422B**

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

Intended use **Adhesive**

| Identified Uses | Industrial | Professional | Consumer |
|-----------------|------------|--------------|----------|
| Use | ✓ | ✓ | - |

1.3. Details of the supplier of the safety data sheet

Name **Permabond Engineering Adhesives**
Full address **Niederkasseler Lohweg 18**
District and Country **40547 Düsseldorf Germany**

Tel. **+44 (0)1962 711 661**

e-mail address of the competent person responsible for the Safety Data Sheet

info.europe@permabond.com

Supplier:

Permabond Engineering Adhesives Ltd
Wessex Way, Colden Common,
Winchester, Hampshire SO21 1WP, UK
tel: **+44 (0)1962 711 661**
mail: **info.europe@permabond.com**

1.4. Emergency telephone number

For urgent inquiries refer to **+44 (0)1962 711 661 (8.00 am-5.00 pm Mon-Fri)**

CHEMTREC UK: +(44)-870-8200418
CHEMTREC Ireland: +(353)-19014670
CHEMTREC Australia: +(61)-290372994
CHEMTREC New Zealand: +(64)-98010034

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2020/878.

Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

| | | |
|---------------------------------|------|--|
| Skin corrosion, category 1B | H314 | Causes severe skin burns and eye damage. |
| Serious eye damage, category 1 | H318 | Causes serious eye damage. |
| Skin sensitization, category 1A | H317 | May cause an allergic skin reaction. |

2.2. Label elements

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

Hazard pictograms:



SECTION 2. Hazards identification ... / >>

Signal words: Danger

Hazard statements:
H314 Causes severe skin burns and eye damage.
H317 May cause an allergic skin reaction.
EUH071 Corrosive to the respiratory tract.

Precautionary statements:
P273 Avoid release to the environment.
P280 Wear protective gloves / protective clothing / eye protection / face protection.
P302+P352 In case of contact with the skin: wash abundantly with soap and water.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 IF exposed or concerned: Get medical advice / attention.

Contains: 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE
 3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)
 AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION
 ATBN POLYMER
 2-piperazin-1-ylethylamine

2.3. Other hazards

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

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

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

| Identification | x = Conc. % | Classification (EC) 1272/2008 (CLP) |
|--|-----------------------|--|
| FATTY ACIDS, C18- UNSATD., DIMERS, POLYMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE | | |
| <i>INDEX</i> | $10 \leq x < 30$ | Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1 H317 |
| <i>EC</i> | 500-191-5 | |
| <i>CAS</i> | 68082-29-1 | |
| 3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE) | | |
| <i>INDEX</i> | $10 \leq x < 30$ | Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317 |
| <i>EC</i> | 224-207-2 | |
| <i>CAS</i> | 4246-51-9 | |
| <i>REACH Reg.</i> | 01-2119963377-26-XXXX | |
| ATBN POLYMER | | |
| <i>INDEX</i> | $10 \leq x < 30$ | Eye Irrit. 2 H319, Skin Irrit. 2 H315, Skin Sens. 1B H317 |
| <i>EC</i> | | |
| <i>CAS</i> | 68683-29-4 | |
| 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE | | |
| <i>INDEX</i> | $10 \leq x < 30$ | Acute Tox. 4 H302, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1A H317 |
| <i>EC</i> | 220-666-8 | |
| <i>CAS</i> | 2855-13-2 | |
| <i>REACH Reg.</i> | 01-2119514687-32-XXXX | |
| AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION | | |
| <i>INDEX</i> | $3 \leq x < 5$ | Acute Tox. 4 H302, Acute Tox. 4 H312, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412, EUH071 |
| <i>EC</i> | 292-588-2 | |
| <i>CAS</i> | 90640-67-8 | |
| <i>REACH Reg.</i> | 01-2119487919-13-XXXX | |

Permabond ET5422B

SECTION 3. Composition/information on ingredients ... / >>

2-piperazin-1-ylethylamine

INDEX 612-105-00-4 $0,1 \leq x < 1$

EC 205-411-0

CAS 140-31-8

REACH Reg. 01-2119471486-30-XXXX

Repr. 2 H361, Acute Tox. 3 H311, Acute Tox. 4 H302, STOT RE 2 H373, Skin Corr. 1B H314, Eye Dam. 1 H318, Skin Sens. 1 H317, Aquatic Chronic 3 H412
STA Oral: 500 mg/kg, LD50 Dermal: 866 mg/kg

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

SECTION 4. First aid measures

4.1. Description of first aid measures

Skin: Wash the skin thoroughly with soap and water. If symptoms arise, request medical assistance

Eyes: Make sure you have removed any contact lenses before rinsing your eyes. Wash readily and abundantly the eyes with water keeping the eyelids open.

Continue to rinse for at least 15 minutes. Consult a doctor if the discomfort continues.

Ingestion: rinse the mouth with water thoroughly. Make a abundant quantity of water drink.

Do not cause vomiting. Consult a doctor.

Inhalation: move the subject exposed in the open air. Consult a doctor in case of serious symptoms or persistent.

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

Contact with the skin: skin irritation. Mild dermatitis, allergic rash.

Contact with eyes: irritating and can cause redness and pain.

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

Note for the doctor no specific recommendation. Symptomatic treatment.

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT

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

UNSUITABLE EXTINGUISHING EQUIPMENT

None in particular.

5.2. Special hazards arising from the substance or mixture

HAZARDS DUE TO EXPOSURE IN THE EVENT OF FIRE

Avoid breathing combustion products, carbon monoxide (CO), carbon dioxide (CO₂), and nitric oxides (NO_x).

5.3. Advice for firefighters

GENERAL INFORMATION

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

SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS

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

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.

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

6.2. Environmental precautions

SECTION 6. Accidental release measures ... / >>

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

6.3. Methods and material for containment and cleaning up

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

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

6.4. Reference to other sections

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

SECTION 7. Handling and storage

7.1. Precautions for safe handling

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

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Keep containers away from any incompatible materials, see section 10 for details.

Storage class TRGS 510 (Germany): 8A

7.3. Specific end use(s)

Adhesive

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Predicted no-effect concentration - PNEC

| | | |
|--|-------|-------|
| Normal value in fresh water | 0,06 | mg/l |
| Normal value in marine water | 0,006 | mg/l |
| Normal value for fresh water sediment | 5,784 | mg/kg |
| Normal value for marine water sediment | 0,578 | mg/kg |
| Normal value for water, intermittent release | 0,23 | mg/l |
| Normal value of STP microorganisms | 3,18 | mg/l |
| Normal value for the terrestrial compartment | 1,121 | mg/kg |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation | | 0,3 mg/kg | | 0,3 mg/kg | | 0,073 mg/m3 | | 0,073 mg/m3 |

SECTION 8. Exposure controls/personal protection ... / >>

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

Predicted no-effect concentration - PNEC

| | | |
|--|--------|-------|
| Normal value in fresh water | 0,0068 | mg/l |
| Normal value in marine water | 0,0068 | mg/l |
| Normal value for fresh water sediment | 3,43 | mg/kg |
| Normal value for marine water sediment | 0,343 | mg/kg |
| Normal value of STP microorganisms | 9,73 | mg/l |
| Normal value for the terrestrial compartment | 0,683 | mg/kg |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|------------------|---------------|--------------------|--------------------|----------------|-----------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | 26 mg/kg bw/d | | 0,53 mg/kg bw/d | | | | |
| Inhalation | | | | | | 6940 mg/m3 | | 1,29 mg/m3 |
| Skin | 1,29 mg/cm2 | | | | | | 0,036 mg/cm2 | |

2-piperazin-1-ylethylamine

Predicted no-effect concentration - PNEC

| | | |
|---|-------|-------|
| Normal value in fresh water | 0,058 | mg/l |
| Normal value in marine water | 0,006 | mg/l |
| Normal value for fresh water sediment | 215 | mg/kg |
| Normal value for marine water sediment | 21,51 | mg/kg |
| Normal value for marine water, intermittent release | 0,58 | mg/l |
| Normal value of STP microorganisms | 250 | mg/l |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|----------------|-----------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Inhalation | | | | | 80 mg/m3 | 10.6 mg/m3 | 0.015 mg/m3 | 10.6 mg/m3 |
| Skin | | | | | | | | 3.33 mg/kg bw/d |

FATTY ACIDS, C18- UNSATD., DIMERS, POLYMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE

Predicted no-effect concentration - PNEC

| | | |
|--|--------|---------|
| Normal value in fresh water | 0,004 | mg/l |
| Normal value in marine water | 0 | mg/l |
| Normal value for fresh water sediment | 434,02 | mg/kg/d |
| Normal value for marine water sediment | 43,4 | mg/kg/d |
| Normal value of STP microorganisms | 3,84 | mg/l |
| Normal value for the terrestrial compartment | 86,78 | mg/kg/d |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|----------------|---------------|----------------------|--------------------|----------------|---------------|------------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 0.0972 mg/kg bw/d | | | | 0.952 |
| Inhalation | | | | 0.169 mg/m3 | | | | 0.952 mg/m3 |
| Skin | | | | 0.0972 mg/kg bw/d | | | | 0.272 mg/kg bw/d |

SECTION 8. Exposure controls/personal protection ... / >>

3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)

Predicted no-effect concentration - PNEC

| | | |
|--|-------|---------|
| Normal value in fresh water | 0,22 | mg/l |
| Normal value in marine water | 0,022 | mg/l |
| Normal value for fresh water sediment | 1,1 | mg/kg/d |
| Normal value for marine water sediment | 0,11 | mg/kg/d |
| Normal value of STP microorganisms | 500 | mg/l |
| Normal value for the terrestrial compartment | 0,091 | mg/kg/d |

Health - Derived no-effect level - DNEL / DMEL

| Route of exposure | Effects on consumers | | | | Effects on workers | | | |
|-------------------|----------------------|----------------|---------------|------------------|--------------------|----------------|---------------|------------------|
| | Acute local | Acute systemic | Chronic local | Chronic systemic | Acute local | Acute systemic | Chronic local | Chronic systemic |
| Oral | | | | 5 mg/kg/d | | | | |
| Inhalation | 6.5 mg/m3 | 52 mg/m3 | 0.5 mg/m3 | 17 mg/m3 | 13 mg/m3 | 176 mg/m3 | 1 mg/m3 | 59 mg/m3 |
| Skin | | | | 5 mg/kg/d | | | | 8.3 mg/kg/d |

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified ; LOW = low hazard ; MED = medium hazard ; HIGH = high hazard.

8.2. Exposure controls

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

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

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

Provide an emergency shower with face and eye wash station.

HAND PROTECTION

Protect hands with category III work gloves.

The following should be considered when choosing work glove material (see standard EN 374): compatibility, degradation, failure time and permeability.

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

SKIN PROTECTION

Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

EYE PROTECTION

Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION

If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.

Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.

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

ENVIRONMENTAL EXPOSURE CONTROLS

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

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Properties | Value | Information |
|--------------------------------|----------------|-------------|
| Appearance | pasty liquid | |
| Colour | blue | |
| Odour | characteristic | |
| Melting point / freezing point | not available | |
| Initial boiling point | not available | |
| Flammability | not available | |
| Lower explosive limit | not available | |
| Upper explosive limit | not available | |

SECTION 9. Physical and chemical properties ... / >>

| | | |
|--|----------------------|--|
| Flash point | > 100 °C | |
| Auto-ignition temperature | not available | |
| Decomposition temperature | not available | |
| pH | not available | Reason for missing data: substance/mixture is non-soluble (in water) |
| Kinematic viscosity | not available | |
| Dynamic viscosity | ~ 546000 mPa.s Thixo | Temperature: 23 °C |
| Solubility | not available | |
| Partition coefficient: n-octanol/water | not available | |
| Vapour pressure | not available | |
| Density and/or relative density | 1 | |
| Relative vapour density | not available | |
| Particle characteristics | not applicable | |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

Information not available

9.2.2. Other safety characteristics

Information not available

SECTION 10. Stability and reactivity

10.1. Reactivity

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

10.2. Chemical stability

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

10.3. Possibility of hazardous reactions

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

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

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

10.4. Conditions to avoid

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

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

Avoid contact with: strong acids, strong oxidants.

10.5. Incompatible materials

Strong reducing and oxidizing agents.

10.6. Hazardous decomposition products

By thermal decomposition, carbon monoxide, carbon dioxide and other unidentified organic compounds.

SECTION 11. Toxicological information

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

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

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

SECTION 11. Toxicological information ... / >>

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture: Not classified (no significant component)
ATE (Oral) of the mixture: >2000 mg/kg
ATE (Dermal) of the mixture: >2000 mg/kg

Corrosive to the respiratory tract.

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

LD50 (Dermal): > 2000 mg/kg RAT (24h)
LD50 (Oral): 1030 mg/kg
LC50 (Inhalation vapours): 5,01 mg/l/4h RAT (4h)

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

LD50 (Dermal): 1260 mg/kg
LD50 (Oral): > 2140 mg/kg
STA (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP
(figure used for calculation of the acute toxicity estimate of the mixture)

2-piperazin-1-ylethylamine

LD50 (Dermal): 866 mg/kg
LD50 (Oral): 2140 mg/kg
STA (Oral): 500 mg/kg estimate from table 3.1.2 of Annex I of the CLP
(figure used for calculation of the acute toxicity estimate of the mixture)

FATTY ACIDS, C18- UNSATD., DIMERS, POLYMERIC REACTION PRODUCTS WITH TALL-OIL FATTY ACIDS AND TRIETHYLENETETRAMINE

LD50 (Dermal): > 2000 mg/kg
LD50 (Oral): > 2000 mg/kg

ATBN POLYMER

LD50 (Dermal): > 2000 mg/kg
LD50 (Oral): > 2000 mg/kg

3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE)

LD50 (Dermal): > 2150 mg/kg
LD50 (Oral): 3160 mg/kg

SKIN CORROSION / IRRITATION

Corrosive for the skin

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye damage

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

SECTION 11. Toxicological information ... / >>

Does not meet the classification criteria for this hazard class

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

11.2. Information on other hazards

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

SECTION 12. Ecological information

12.1. Toxicity

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

| | |
|---|---------------------------------------|
| LC50 - for Fish | 110 mg/l/96h LEUCISCUS IDUS |
| EC50 - for Crustacea | 23 mg/l/48h DAPHNIA MAGNA |
| EC50 - for Algae / Aquatic Plants | > 50 mg/l/72h DESMODESMUS SUBSPICATUS |
| EC10 for Algae / Aquatic Plants | 11,2 mg/l/72h SCENEDESMUS SUBSPICATUS |
| Chronic NOEC for Algae / Aquatic Plants | > 3 mg/l DAPHNIA MAGNA |

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

| | |
|----------------------|---------------|
| LC50 - for Fish | 420 mg/l/96h |
| EC50 - for Crustacea | 24,1 mg/l/48h |

2-piperazin-1-ylethylamine

| | |
|-----------------------------------|-----------------|
| LC50 - for Fish | 2190 mg/l/96h |
| EC50 - for Crustacea | 58 mg/l/48h |
| EC50 - for Algae / Aquatic Plants | > 1000 mg/l/72h |

12.2. Persistence and degradability

3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE

| | |
|------------------------|-------------------|
| Solubility in water | 1000 - 10000 mg/l |
| NOT rapidly degradable | |

12.3. Bioaccumulative potential

Information not available

12.4. Mobility in soil

Information not available

12.5. Results of PBT and vPvB assessment

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

12.6. Endocrine disrupting properties

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

12.7. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

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

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

Waste transportation may be subject to ADR restrictions.

CONTAMINATED PACKAGING

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

Waste class 08 04 09* stickers and sealed sealing, containing organic solvents or other dangerous substances.

SECTION 14. Transport information

14.1. UN number or ID number

ADR / RID, IMDG, IATA: 2735

14.2. UN proper shipping name

ADR / RID: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE, 3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE))

IMDG: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. 3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE, 3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE))

IATA: AMINES, LIQUID, CORROSIVE, N.O.S. or POLYAMINES, LIQUID, CORROSIVE, N.O.S. (3-AMINOMETHYL 3,5,5-TRIMETHYLCYCLOHEXYLAMINE, 3,3'-OXYBIS(ETHYLENEOXY)BIS(PROPYLAMINE))

14.3. Transport hazard class(es)

ADR / RID: Class: 8 Label: 8



IMDG: Class: 8 Label: 8



IATA: Class: 8 Label: 8



14.4. Packing group

ADR / RID, IMDG, IATA: II

14.5. Environmental hazards

ADR / RID: NO

IMDG: NO

IATA: NO

14.6. Special precautions for user

ADR / RID: HIN - Kemler: 80 Limited Quantities: 1 L Tunnel restriction code: (E)

Special provision: 274

IMDG: EMS: F-A, S-B Limited Quantities: 1 L

IATA: Cargo: Maximum quantity: 30 L

Passengers: Maximum quantity: 1 L

Special provision: A3, A803

Packaging instructions: 855

Packaging instructions: 851

14.7. Maritime transport in bulk according to IMO instruments

Information not relevant

SECTION 16. Other information ... / >>

LEGEND:

- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- ATE: Acute Toxicity Estimate
- CAS: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE: Identifier in ESIS (European archive of existing substances)
- CLP: Regulation (EC) 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: Regulation (EC) 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA: Time-weighted average exposure limit
- TWA STEL: Short-term exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY

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

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

Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the

suitability and thoroughness of provided information according to each specific use of the product.

This document must not be regarded as a guarantee on any specific product property.

The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.

Provide appointed staff with adequate training on how to use chemical products.

CALCULATION METHODS FOR CLASSIFICATION

Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.

Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.

Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.