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

1.1. Product identifier

Trade name/designation:

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

Relevant identified uses:

Sector of uses [SU]

SU 19: Building and construction work

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Euroteam Bauchemie GmbH

An der Mühle 1 15345 Altlandsberg

Germany

Telephone: +49 (0) 33438 14790
Telefax: +49 (0) 33438 147929
E-mail: info@euroteam-bauchemie.de
Website: www.euroteam-bauchemie.de

E-mail (competent person): info@euroteam-bauchemie.de

1.4. Emergency telephone number

Labor, 24h: +49 (0) 162 2599220, Montag - Donnerstag 7:00 - 16:00; Freitag 7:00 - 13:00 +49 (0) 33438 1479 19 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

| Hazard classes and hazard categories | Hazard statements | Classification pro cedure |
|--|--|---------------------------|
| Skin corrosion/irritation (Skin Irrit. 2) | H315: Causes skin irritation. | |
| Respiratory or skin sensitisation (Skin Sens. 1) | H317: May cause an allergic skin reaction. | |
| Serious eye damage/eye irritation (Eye Irrit. 2) | H319: Causes serious eye irritation. | |
| Hazardous to the aquatic environment (Aquatic Chronic 3) | H412: Harmful to aquatic life with long lasting effects. | |

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms:



GHS07

Exclamation mark

Signal word: Warning

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Hazard components for labelling:

reaction product: bisphenol-A-(epichlorhydrin)epoxy resin (number average) molecular weight <= 700; 1,6-hexanediol diglycidyl ether; reaction product: bisphenol-F-(epichlorhydrin)epoxy resin (number average) molecular weight <= 700; 1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane

| hazard statements for health hazards | |
|--------------------------------------|--------------------------------------|
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |

| Hazard statements for environmental hazards | | |
|---|--|--|
| H412 | Harmful to aquatic life with long lasting effects. | |

| Supplemental Hazard information (EU) | | |
|--------------------------------------|--|--|
| EUH205 | Contains epoxy constituents. May produce an allergic reaction. | |

| Precautionary statements Prevention | | |
|-------------------------------------|--|--|
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray. | |
| P264 | Wash hands thoroughly after handling. | |
| P272 | Contaminated work clothing should not be allowed out of the workplace. | |

| Precautionary statements Response | | |
|--|--|--|
| P333 + P313 If skin irritation or rash occurs: Get medical advice/attention. | | |
| P337 + P313 If eye irritation persists: Get medical advice/attention. | | |

2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

| product identifiers | Substance name Classification according to Regulation (EC) No 1272/2008 [CLP] | Concen- tration |
|---|--|--------------------|
| CAS No.: 25068-38-6 EC No.: 500-033-5 REACH No.: 01-2119456619-26-XXXX | reaction product: bisphenol-A-(epichlorhydrin)epoxy resin (number average) molecular weight <= 700 Aquatic Chronic 2, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1 1 | 10 - 15 % |
| CAS No.: 16096-31-4 EC No.: 240-260-4 REACH No.: 01-2119463471-41-XXXX | 1,6-hexanediol diglycidyl ether Aquatic Chronic 3, Eye Irrit. 2, Skin Irrit. 2, Skin Sens. 1 1 H315-H317-H319-H412 | 1 - 5 % |
| CAS No.: 80-48-8 EC No.: 201-283-5 | methyl toluene-4-sulphonate Acute Tox. 4, Eye Irrit. 2, STOT SE 3, Skin Irrit. 2, Skin Sens. 1 H302-H315-H317-H319-H335 | 1 - 5 % |
| CAS No.: 17557-23-2 EC No.: 241-536-7 | 1,3-bis(2,3-epoxypropoxy)-2,2-dimethylpropane Skin Irrit. 2, Skin Sens. 1 • Warning H315-H317 | 1 - 5 |
| CAS No.: 9003-36-5 EC No.: 500-006-8 REACH No.: 01-2119454392-40-XXXX | reaction product: bisphenol-F-(epichlorhydrin)epoxy resin (number average) molecular weight <= 700 The substance is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP]. | 2.5 - 5 |

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Take off immediately all contaminated clothing and wash it before reuse.

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Following inhalation:

In case of respiratory tract irritation, consult a physician. Apply cortisone spray at early stage.

In case of skin contact:

After contact with skin, wash immediately with plenty of water and soap.

After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.

After ingestion:

Do NOT induce vomiting. Immediately call a doctor.

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

No known symptoms to date.

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

none

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2), Water spray jet

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Gases/vapours, harmful

Hazardous combustion products:

Hazardous decomposition products: Carbon dioxide (CO2), Carbon monoxide, Nitrogen oxides (NOx)

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

5.4. Additional information

Collect contaminated fire extinguishing water separately. This must not be discharged into drains.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Provide adequate ventilation. To follow: SECTION 7: Handling and storage; Personal protection equipment: see section 8

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into soil/subsoil. Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For containment:

Take up mechanically. Disposal: see section 13

6.4. Reference to other sections

Safe handling: see section 7 Disposal: see section 13 Personal protection equipment: see section 8

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Avoid contact with eyes and skin. When using do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels:

Store in a closed container.

Hints on storage assembly:

Keep away from food, drink and animal feedingstuffs.

Storage class: 10 - Combustible liquids that cannot be assigned to any of the above storage classes

Further information on storage conditions:

Keep container dry. To follow: Recommended storage temperature

7.3. Specific end use(s)

Industrial sector specific solutions:

Epoxy resin products, solvent-free, sensitising

GISCODE:

RE1

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

No data available

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

| Substance name | DNEL value | ① DNEL type |
|---|------------------------|---|
| | | ② Exposure route |
| reaction product: bisphenol-A-(epichlorhydr | 12.3 mg/m ³ | ① DNEL worker |
| in)epoxy resin (number average) molecular weight <= 700 CAS No.: 25068-38-6 | | ② inhalative, short-term, systemic, (acute) |
| reaction product: bisphenol-A-(epichlorhydr in)epoxy resin (number average) molecular weight <= 700 CAS No.: 25068-38-6 | 8.3 mg/kg | ① DNEL worker ② Acute – dermal, systemic effects |

| Substance name | PNEC Value | ① PNEC type |
|---|-------------|------------------------------|
| reaction product: bisphenol-A-(epichlorhydr in)epoxy resin (number average) molecular weight <= 700 CAS No.: 25068-38-6 | 0.006 mg/l | ① PNEC aquatic, freshwater |
| reaction product: bisphenol-A-(epichlorhydr in)epoxy resin (number average) molecular weight <= 700 CAS No.: 25068-38-6 | 0.0006 mg/l | ① PNEC aquatic, marine water |

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

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Skin protection:

Wear protective gloves. Suitable gloves type: plastic. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Check leak tightness/impermeability prior to use. Use protective skin cream before handling the product. Suitable material: NBR (Nitrile rubber), FKM (fluoro rubber). Thickness of the glove material: >= 0,5 mm. Breakthrough time (maximum wearing time): >= 480 min. Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable protective clothing.

Respiratory protection:

Respiratory protection necessary at: exceeding exposure limit values. Suitable respiratory protection apparatus: Half-face mask or quarter facepiece: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 10 times the exposure limit. P3 filter: up to a max. of 30 times the expo.

Other protection measures:

Keep away from food, drink and animal feedingstuffs. Take off immediately all contaminated clothing and wash it before reuse. Wash hands before breaks and after work. Wear suitable protective clothing.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: solid Colour: grey

Odour: characteristic

Safety relevant basis data

| parameter | | at °C | Method | Remark |
|--|----------------|-------|--------|--------|
| pH | not determined | | | |
| Melting point | not determined | | | |
| Freezing point | not determined | | | |
| Initial boiling point and boiling range | > 200 °C | | | |
| Decomposition temperature | not determined | | | |
| Flash point | > 100 °C | | | |
| Evaporation rate | not determined | | | |
| Auto-ignition temperature | not determined | | | |
| Upper/lower flammability or explosive limits | not determined | | | |
| Vapour pressure | not applicable | | | |
| Vapour density | not determined | | | |
| Density | 2 g/cm³ | 23 °C | | |
| Bulk density | not determined | | | |
| Water solubility | not determined | | | |
| Partition coefficient: n-octanol/ water | not determined | | | |
| Dynamic viscosity | not determined | | | |
| Kinematic viscosity | not determined | | | |

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

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10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

none

10.5. Incompatible materials

Incompatible materials: Strong acid, Alkalis, Oxidising agent

10.6. Hazardous decomposition products

Carbon dioxide, Nitrogen oxides (NOx), Carbon monoxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| CAS No. | Substance name | Toxicological information |
|------------|---|--|
| 25068-38-6 | reaction product: bisphenol-A- (epichlorhydrin)epoxy resin (number average) molecular weight <= 700 | LD ₅₀ oral: 15,000 mg/kg (Rat) |
| | Tholecular weight <= 700 | LD ₅₀ dermal: |
| | | 23,000 mg/kg (Rabbit) |
| 9003-36-5 | reaction product: bisphenol-F- | LD ₅₀ oral: |
| | (epichlorhydrin)epoxy resin (number average) | >10,000 mg/kg (Rat) |
| | molecular weight <= 700 | LD ₅₀ dermal: |
| | | >2,000 mg/kg (Rat) |

Skin corrosion/irritation:

Irritating to skin.

Serious eye damage/irritation:

Irritating to eyes.

Respiratory or skin sensitisation:

Sensitisation to the respiratory tract. Skin sensitisation.

Additional information:

The product is skin resorptive.

SECTION 12: Ecological information

12.1. Toxicity

| CAS No. | Substance name | Toxicological information |
|------------|---|---|
| 25068-38-6 | reaction product: bisphenol-A- (epichlorhydrin)epoxy resin (number average) molecular weight <= 700 | LC ₅₀ : 3.6 mg/l 4 d (fish, Leuciscus idus (golden orfe)) ErC ₅₀ : 220 mg/l 3 d (Algae/water plant) EC ₅₀ : 2.8 mg/l 2 d (crustaceans) |
| 9003-36-5 | reaction product: bisphenol-F- (epichlorhydrin)epoxy resin (number average) molecular weight <= 700 | EC ₅₀ : 2.54 mg/l 4 d (fish) LC ₅₀ : 2.55 mg/l 2 d (crustaceans) LC ₅₀ : 1.8 mg/l 3 d (Algae/water plant) |

Assessment/classification:

No information available.

Additional ecotoxicological information:

Do not allow to enter into surface water or drains.

12.2. Persistence and degradability

Additional information:

No information available.

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12.3. Bioaccumulative potential

| CAS No. | Substance name | Log K _{OW} | Bioconcentration factor (BCF) |
|---------|---|---------------------|-------------------------------|
| | reaction product: bisphenol-F-(epichlorhydri n)epoxy resin (number average) molecular weight <= 700 | 3.6 | |

Accumulation / Evaluation:

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

| CAS No. | Substance name | Results of PBT and vPvB assessment |
|------------|---|------------------------------------|
| 25068-38-6 | reaction product: bisphenol-A- (epichlorhydrin)epoxy resin (number average) molecular weight <= 700 | _ |
| 16096-31-4 | 1,6-hexanediol diglycidyl ether | _ |
| 9003-36-5 | reaction product: bisphenol-F- (epichlorhydrin)epoxy resin (number average) molecular weight <= 700 | |

No information available.

12.6. Other adverse effects

No information available.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 01 12 waste paint and varnish other than those mentioned in 08 01 11

SECTION 14: Transport information

No dangerous good in sense of these transport regulations.

| Land transport (ADR/RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO- TI / IATA-DGR) |
|--|--|--|--|
| 14.1. UN-No. | _ | | - |
| No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. |
| 14.2. UN proper shi | ipping name | | |
| No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. | No dangerous good in sense of these transport regulations. |
| 14.3. Transport haz | ard class(es) | | |
| not relevant | | | _ |
| 14.4. Packing group | • | | |
| not relevant | | | _ |
| 14.5. Environmenta | ıl hazards | | |
| not relevant | | | |

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| _ | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO- TI / IATA-DGR) |
|------------------------------------|--------------------------------|----------------------|--|
| 14.6. Special precautions for user | | | |
| not relevant | | | |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code not relevant

SECTION 15: Regulatory information

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

15.1.1. EU legislation

No data available

15.1.2. National regulations

[DE] National regulations

Water hazard class (WGK)

WGK:

2 - deutlich wassergefährdend

Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Vorschriften (BGV): D25 Berufsgenossenschaftliche Informationen (BGI): 595 Berufsgenossenschaftliche Regeln (BGR): 227

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

No data available

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

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

| Hazard classes and hazard categories | Hazard statements | Classification pro cedure |
|--|--|---------------------------|
| Skin corrosion/irritation (Skin Irrit. 2) | H315: Causes skin irritation. | |
| Respiratory or skin sensitisation (Skin Sens. 1) | H317: May cause an allergic skin reaction. | |
| Serious eye damage/eye irritation (Eye Irrit. 2) | H319: Causes serious eye irritation. | |
| Hazardous to the aquatic environment (Aquatic Chronic 3) | H412: Harmful to aquatic life with long lasting effects. | |

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

| Hazard statements | |
|-------------------|--------------------------------------|
| H302 | Harmful if swallowed. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H319 | Causes serious eye irritation. |
| H335 | May cause respiratory irritation. |

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| Hazard statements | |
|-------------------|--|
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

16.6. Training advice

No data available

16.7. Additional information

according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

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

Relevant identified uses:

Sector of uses [SU]

SU 19: Building and construction work

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Euroteam Bauchemie GmbH

An der Mühle 1 15345 Altlandsberg

Germany

Telephone: +49 (0) 33438 14790
Telefax: +49 (0) 33438 147929
E-mail: info@euroteam-bauchemie.de
Website: www.euroteam-bauchemie.de

E-mail (competent person): info@euroteam-bauchemie.de

1.4. Emergency telephone number

Labor, 24h: +49 (0) 162 2599220, Montag - Donnerstag 7:00 - 16:00; Freitag 7:00 - 13:00 +49 (0) 33438 1479 19 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

| Hazard classes and hazard categories | Hazard statements | Classification pro cedure |
|--|--|---------------------------|
| Acute toxicity (oral) (Acute Tox. 4) | H302: Harmful if swallowed. | |
| Acute toxicity (dermal) (Acute Tox. 4) | H312: Harmful in contact with skin. | |
| Skin corrosion/irritation (Skin Corr. 1B) | H314: Causes severe skin burns and eye damage. | |
| Respiratory or skin sensitisation (Skin Sens. 1) | H317: May cause an allergic skin reaction. | |
| Hazardous to the aquatic environment (Aquatic Chronic 3) | H412: Harmful to aquatic life with long lasting effects. | |

according to Regulation (EC) No. 1907/2006 (REACH)

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms:





GHS05 Corrosion

GHS07 Exclamation mark

Signal word: Danger

Hazard components for labelling:

2-piperazin-1-ylethylamine; Polyaminoamide; 3,6,9-triazaundecamethylenediamine

| hazard statements for health hazards | |
|--------------------------------------|--|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |

| Hazard statements for environmental hazards | |
|---|--|
| H412 | Harmful to aquatic life with long lasting effects. |

| Precautionary statements Prevention | |
|-------------------------------------|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. |

| Precautionary statements Response | |
|-----------------------------------|--|
| P302 + P352 | IF ON SKIN: Wash with plenty of 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. |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. |

2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

| product identifiers | Substance name Classification according to Regulation (EC) No 1272/2008 [CLP] | Concen- tration |
|---|--|--------------------|
| CAS No.: 140-31-8 | 2-piperazin-1-ylethylamine | 40 - 45 |
| EC No.: 205-411-0 | Acute Tox. 4, Aquatic Chronic 3, Skin Corr. 1B, Skin Sens. 1 | % |
| REACH No.: 01-2119471486-30-XXXX | ♦ ♠ Danger H302-H312-H314-H317-H412 | |
| CAS No.: 68410-23-1 | Polyaminoamide Eye Irrit. 2, Flam. Liq. 3, Skin Corr. 1C, Skin Sens. 1 H226-H314-H317-H319 | 10 - 15 % |
| CAS No.: 112-57-2 | 3,6,9-triazaundecamethylenediamine | 1 - 2.5 |
| EC No.: 203-986-2 | Acute Tox. 4, Aquatic Chronic 2, Skin Corr. 1B, Skin Sens. 1 | % |
| REACH No.: 01-2119487290-37-XXXX | ♦ ♦ Danger H302-H312-H314-H317-H411 | |

Full text of H- and EUH-phrases: see section 16.

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SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Take off immediately all contaminated clothing.

Following inhalation:

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician. Apply cortisone spray at early stage. If unconscious place in recovery position and seek medical advice.

In case of skin contact:

Wash immediately with: Water. For cleaning up: Polyethylene glycol 400 Subsequently wash off with: Water. Call a physician immediately.

After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Call a physician immediately.

After ingestion:

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water.

Self-protection of the first aider:

First aider: Pay attention to self-protection!

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

No known symptoms to date.

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

none

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2), Water spray jet

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Hazardous combustion products:

In case of fire may be liberated: Carbon dioxide (CO2), Nitrogen oxides (NOx), Carbon monoxide

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Provide adequate ventilation. Avoid: Inhalation of vapours or spray/mists. Safe handling: see section 7, Personal protection equipment: see section 8

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

according to Regulation (EC) No. 1907/2006 (REACH)

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6.3. Methods and material for containment and cleaning up

For cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

No data available

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Avoid: Skin contact, Eye contact, Inhalation of vapours or spray/mists. When using do not eat, drink or smoke.

Advices on general occupational hygiene

Wash hands before breaks and after work. Apply skin care products after work. Use protective skin cream before handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed.

Requirements for storage rooms and vessels:

Keep container tightly closed and dry. To follow: Recommended storage temperature

Hints on storage assembly:

Keep away from food, drink and animal feedingstuffs. **Storage class:** 8A - Combustible corrosive substances

7.3. Specific end use(s)

Industrial sector specific solutions:

Epoxy resin products, solvent-free, sensitising

GISCODE:

RE1

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

No data available

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

| Substance name | DNEL value | ① DNEL type② Exposure route |
|---|------------------------|---|
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 21.4 mg/m ³ | ① DNEL worker② inhalative, short-term, systemic, (acute) |
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 20 mg/kg | DNEL worker Acute - dermal, systemic effects |

| Substance name | PNEC Value | ① PNEC type |
|---|-------------|------------------------------|
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 0.058 mg/l | ① PNEC aquatic, freshwater |
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 0.0058 mg/l | ① PNEC aquatic, marine water |

according to Regulation (EC) No. 1907/2006 (REACH)

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8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

Skin protection:

Wear protective gloves. Suitable gloves type: plastic. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Check leak tightness/impermeability prior to use. Use protective skin cream before handling the product. Suitable material: NBR (Nitrile rubber), FKM (fluoro rubber). Thickness of the glove material: >= 0,5 mm. Breakthrough time (maximum wearing time): >= 480 min. Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable protective clothing.

Respiratory protection:

Respiratory protection necessary at: exceeding exposure limit values. Suitable respiratory protection apparatus: Half-face mask or quarter facepiece: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 10 times the exposure limit. P3 filter: up to a max. of 30 times the expo.

Other protection measures:

Keep away from food, drink and animal feedingstuffs. Take off immediately all contaminated clothing and wash it before reuse. Wear suitable protective clothing. Wash hands before breaks and after work.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid Colour: yellow

Odour: Amines

Safety relevant basis data

| parameter | | at °C | Method | Remark |
|--|----------------|-------|--------|--------|
| рН | not determined | | | |
| Melting point | not determined | | | |
| Freezing point | not determined | | | |
| Initial boiling point and boiling range | > 200 °C | | | |
| Decomposition temperature | not determined | | | |
| Flash point | > 93 °C | | | |
| Evaporation rate | not determined | | | |
| Auto-ignition temperature | not determined | | | |
| Upper/lower flammability or explosive limits | not determined | | | |
| Vapour pressure | < 1 hPa | 50 °C | | |
| Vapour density | not determined | | | |
| Density | ≈ 1 g/cm³ | 23 °C | | |
| Bulk density | not determined | | | |
| Water solubility | not determined | | | |
| Partition coefficient: n-octanol/ water | not determined | | | |
| Dynamic viscosity | not determined | | | |
| Kinematic viscosity | not determined | | | |
| flow time | 50 - 70 s | 23 °C | | |

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9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

none

10.5. Incompatible materials

Incompatible materials: Strong acid, Alkalis, Oxidising agent

10.6. Hazardous decomposition products

Nitrogen oxides (NOx), Carbon dioxide (CO2), Carbon monoxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| CAS No. | Substance name | Toxicological information |
|----------|------------------------------------|---------------------------|
| 140-31-8 | 2-piperazin-1-ylethylamine | LD ₅₀ oral: |
| | | 2,110 mg/kg (Rat) |
| | | LD ₅₀ dermal: |
| | | 867 mg/kg (Rabbit) |
| 112-57-2 | 3,6,9-triazaundecamethylenediamine | LD ₅₀ oral: |
| | | 3,990 mg/kg (Rat) |
| | | LD ₅₀ dermal: |
| | | 660 mg/kg (Rabbit) |

Skin corrosion/irritation:

corrosive

Serious eye damage/irritation:

Corrosive

Additional information:

Skin corrosion/irritation, Causes serious eye damage. The product is skin resorptive. Sensitising. Harmful if swallowed. IF INHALED: Do not breathe gas/vapour. Adverse human health effects and symptoms: Dizziness, Headache, Nausea.

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SECTION 12: Ecological information

12.1. Toxicity

| CAS No. | Substance name | Toxicological information |
|----------|------------------------------------|--|
| 140-31-8 | 2-piperazin-1-ylethylamine | LC ₅₀ : 2,190 mg/l 4 d (fish, Pimephales promelas |
| | | (fathead minnow)) OECD 203 |
| | | EC ₅₀ : 58 mg/l 2 d (crustaceans, Daphnia magna |
| | | (Big water flea)) OECD 202 |
| | | ErC ₅₀ : >1,000 mg/l 3 d (Algae/water plant, Pseu |
| | | dokirchneriella subcapitata) OECD 201 |
| | | EC₅₀: 494 mg/l 2 d (Algae/water plant, Selenastr um capricornutum) |
| | | LC ₅₀ : 368 mg/l 4 d (fish, Poecilia reticulata |
| | | (Guppy)) |
| 112-57-2 | 3,6,9-triazaundecamethylenediamine | EC₅₀: 14.6 mg/l 2 d (crustaceans, Daphnia magna (Big water flea)) |

Aquatic toxicity:

No information available.

Additional ecotoxicological information:

No information available.

12.2. Persistence and degradability

| CAS No. | Substance name | Biodegradation | Remark |
|----------|----------------------------|----------------|--|
| 140-31-8 | 2-piperazin-1-ylethylamine | No | Biodegradation: 0 %, Test duration: 28 d, Method: OECD F |

Additional information:

No information available.

12.3. Bioaccumulative potential

| CAS No. | Substance name | Log K _{OW} | Bioconcentration factor (BCF) |
|----------|----------------------------|---------------------|-------------------------------|
| 140-31-8 | 2-piperazin-1-ylethylamine | -1.48 | |

Accumulation / Evaluation:

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

| CAS No. | Substance name | Results of PBT and vPvB assessment |
|----------|------------------------------------|------------------------------------|
| 140-31-8 | 2-piperazin-1-ylethylamine | _ |
| 112-57-2 | 3,6,9-triazaundecamethylenediamine | _ |

No information available.

12.6. Other adverse effects

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

| | Waste paint and varnish containing organic solvents or other dangerous substances |
|--|---|
| | |
| | |
| | |

^{*:} Evidence for disposal must be provided.

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SECTION 14: Transport information

| SECTION 14: ITAN | sport illiorillation | | | | |
|---|--|---|--|--|--|
| Land transport (ADR/RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO- TI / IATA-DGR) | | |
| 14.1. UN-No. | | | | | |
| UN 2735 | UN 2735 | UN 2735 | UN 2735 | | |
| 14.2. UN proper shi | pping name | | | | |
| POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine, IP:STN_ad6f8b78-9db7) 14.3. Transport haz |) | POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine, PISTN_ad6f8b78-9db7) | POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1-ylethylamine, -\P:STN_ad6f8b78-9db7-) | | |
| 14.4. Packing group |) | | | | |
| III | III | III | III | | |
| 14.5. Environmenta | l hazards | | | | |
| No data available | | | | | |
| 14.6. Special preca | utions for user | | | | |
| Special provisions: E Limited quantity (LQ): Limited quantity (LQ) 7 Excepted Quantities (EQ): Hazard identificati on number (Kemler No.): 80 Classification code: C7 Remark: | Special provisions: E 1 Excepted Quantities (EQ): Classification code: C7 Remark: | Special provisions: E 1 Limited quantity (LQ): Limited quantity (LQ) 5 L Excepted Quantities (EQ): EmS-No.: F-A, ; S-B Remark: | Special provisions: E 1 Excepted Quantities (EQ): Remark: | | |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

according to Regulation (EC) No. 1907/2006 (REACH)

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15.1.2. National regulations



Water hazard class (WGK)

WGK:

3 - stark wassergefährdend

Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Vorschriften (BGV): D 25 Berufsgenossenschaftliche Informationen (BGI): 595Berufsgenossenschaftliche Regeln (BGR): 227

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

No data available

16.3. Key literature references and sources for data

No data available

16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

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

| Hazard classes and hazard categories | Hazard statements | Classification pro cedure |
|--|--|---------------------------|
| Acute toxicity (oral) (Acute Tox. 4) | H302: Harmful if swallowed. | |
| Acute toxicity (dermal) (Acute Tox. 4) | H312: Harmful in contact with skin. | |
| Skin corrosion/irritation (Skin Corr. 1B) | H314: Causes severe skin burns and eye damage. | |
| Respiratory or skin sensitisation (Skin Sens. 1) | H317: May cause an allergic skin reaction. | |
| Hazardous to the aquatic environment (Aquatic Chronic 3) | H412: Harmful to aquatic life with long lasting effects. | |

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

| Hazard statements | | |
|-------------------|--|--|
| H226 | Flammable liquid and vapour. | |
| H302 | Harmful if swallowed. | |
| H312 | Harmful in contact with skin. | |
| H314 | Causes severe skin burns and eye damage. | |
| H317 | May cause an allergic skin reaction. | |
| H319 | Causes serious eye irritation. | |
| H411 | Toxic to aquatic life with long lasting effects. | |
| H412 | Harmful to aquatic life with long lasting effects. | |

16.6. Training advice

No data available

16.7. Additional information

according to Regulation (EC) No. 1907/2006 (REACH)

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

1.1. Product identifier

Trade name/designation:

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

Relevant identified uses:

Sector of uses [SU]

SU 19: Building and construction work

Uses advised against:

Sector of uses [SU]

SU 21: Consumer uses

1.3. Details of the supplier of the safety data sheet

Supplier (manufacturer/importer/only representative/downstream user/distributor):

Euroteam Bauchemie GmbH

An der Mühle 1 15345 Altlandsberg

Germany

Telephone: +49 (0) 33438 14790
Telefax: +49 (0) 33438 147929
E-mail: info@euroteam-bauchemie.de
Website: www.euroteam-bauchemie.de

E-mail (competent person): info@euroteam-bauchemie.de

1.4. Emergency telephone number

Labor, 24h: +49 (0) 162 2599220, Montag - Donnerstag 7:00 - 16:00; Freitag 7:00 - 13:00 +49 (0) 33438 1479 19 (Only available during office hours.)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

| Hazard classes and hazard categories | Hazard statements | Classification pro cedure |
|--|--|---------------------------|
| Acute toxicity (oral) (Acute Tox. 4) | H302: Harmful if swallowed. | |
| Acute toxicity (dermal) (Acute Tox. 4) | H312: Harmful in contact with skin. | |
| Skin corrosion/irritation (Skin Corr. 1B) | H314: Causes severe skin burns and eye damage. | |
| Respiratory or skin sensitisation (Skin Sens. 1) | H317: May cause an allergic skin reaction. | |
| Hazardous to the aquatic environment (Aquatic Chronic 2) | H411: Toxic to aquatic life with long lasting effects. | |

according to Regulation (EC) No. 1907/2006 (REACH)

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2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP] Hazard pictograms:







GHS07 Exclamation mark



GHS09 Environment

Signal word: Danger

Hazard components for labelling:

2-piperazin-1-ylethylamine; Phenol, styrenated

| hazard statements for health hazards | | |
|--------------------------------------|--|--|
| H302 | Harmful if swallowed. | |
| H312 | Harmful in contact with skin. | |
| H314 | Causes severe skin burns and eye damage. | |
| H317 | May cause an allergic skin reaction. | |

| Hazard statements for environmental hazards | | |
|---|--|--|
| H411 | Toxic to aquatic life with long lasting effects. | |

| Precautionary Statements Prevention | | |
|-------------------------------------|--|--|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection. | |

| Precautionary Statements Response | | |
|-----------------------------------|--|--|
| P302 + P352 | IF ON SKIN: Wash with plenty of 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. | |
| P333 + P313 | If skin irritation or rash occurs: Get medical advice/attention. | |
| P337 + P313 | If eye irritation persists: Get medical advice/attention. | |

2.3. Other hazards

No data available

SECTION 3: Composition / information on ingredients

3.2. Mixtures

Hazardous ingredients / Hazardous impurities / Stabilisers:

| product identifiers | Substance name Classification according to Regulation (EC) No 1272/2008 [CLP] | Concen- tration |
|---|---|--------------------|
| CAS No.: 61788-44-1 | Phenol, styrenated | 50 - 100 |
| EC No.: 262-975-0 | Aquatic Chronic 2, Skin Irrit. 2, Skin Sens. 1 | % |
| REACH No.: 01-2119980970-27-XXXX | ♦ H315-H317-H411 | |
| CAS No.: 140-31-8 | 2-piperazin-1-ylethylamine | 25 - 50 |
| EC No.: 205-411-0 | Acute Tox. 4, Aquatic Chronic 3, Skin Corr. 1B, Skin Sens. 1 | % |
| REACH No.: 01-2119471486-30-XXXX | ♦ ① Danger H302-H312-H314-H317-H412 | |

Full text of H- and EUH-phrases: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information:

Take off immediately all contaminated clothing.

according to Regulation (EC) No. 1907/2006 (REACH)

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Following inhalation:

Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration. In case of respiratory tract irritation, consult a physician. Apply cortisone spray at early stage. If unconscious place in recovery position and seek medical advice.

In case of skin contact:

Wash immediately with: Water. For cleaning up: Polyethylene glycol 400 Subsequently wash off with: Water. Call a physician immediately.

After eye contact:

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Call a physician immediately.

After ingestion:

Do NOT induce vomiting. Rinse mouth immediately and drink plenty of water.

Self-protection of the first aider:

First aider: Pay attention to self-protection!

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

No known symptoms to date.

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

none

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2), Water spray jet

Unsuitable extinguishing media:

Full water jet

5.2. Special hazards arising from the substance or mixture

Harmful: danger of serious damage to health by prolonged exposure through inhalation.

Hazardous combustion products:

In case of fire may be liberated: Carbon dioxide (CO2), Nitrogen oxides (NOx), Carbon monoxide

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

5.4. Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Personal precautions:

Provide adequate ventilation. Avoid: Inhalation of vapours or spray/mists. Safe handling: see section 7, Personal protection equipment: see section 8

6.1.2. For emergency responders

No data available

6.2. Environmental precautions

Do not allow to enter into surface water or drains. In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

6.3. Methods and material for containment and cleaning up

For cleaning up:

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

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SECTION 7: Handling and storage

7.1. Precautions for safe handling

Protective measures

Advices on safe handling:

Avoid: Skin contact, Eye contact, Inhalation of vapours or spray/mists. When using do not eat, drink or smoke

Advices on general occupational hygiene

Wash hands before breaks and after work. Apply skin care products after work. Use protective skin cream before handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures and storage conditions:

Keep container tightly closed.

Requirements for storage rooms and vessels:

Keep container tightly closed and dry. To follow: Recommended storage temperature

Hints on storage assembly:

Keep away from food, drink and animal feedingstuffs. **Storage class:** 8A - Combustible corrosive substances

7.3. Specific end use(s)

Industrial sector specific solutions:

Epoxy resin products, solvent-free, sensitising

GISCODE:

RE1

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. Occupational exposure limit values

No data available

8.1.2. Biological limit values

No data available

8.1.3. DNEL-/PNEC-values

| Substance name | DNEL value | ① DNEL type ② Exposure route |
|---|------------------------|---|
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 21.4 mg/m ³ | ① DNEL worker② inhalative, short-term, systemic, (acute) |
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 20 mg/kg | DNEL worker Acute - dermal, systemic effects |

| Substance name | PNEC Value | ① PNEC type |
|---|-------------|------------------------------|
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 0.058 mg/l | ① PNEC aquatic, freshwater |
| 2-piperazin-1-ylethylamine CAS No.: 140-31-8 | 0.0058 mg/l | ① PNEC aquatic, marine water |

8.2. Exposure controls

8.2.1. Appropriate engineering controls

No data available

8.2.2. Personal protection equipment

Eye/face protection:

Eye glasses with side protection

according to Regulation (EC) No. 1907/2006 (REACH)

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Skin protection:

Wear protective gloves. Suitable gloves type: plastic. When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Check leak tightness/ impermeability prior to use. Use protective skin cream before handling the product. Suitable material: NBR (Nitrile rubber), FKM (fluoro rubber). Thickness of the glove material: >= 0,5 mm. Breakthrough time (maximum wearing time): >= 480 min. Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Wear suitable protective clothing.

Respiratory protection:

Respiratory protection necessary at: exceeding exposure limit values. Suitable respiratory protection apparatus: Half-face mask or quarter facepiece: maximum use concentration for substances with exposure limits: P1 filter: up to a max. of 4 times the exposure limit. P2 filter: up to a max. of 10 times the exposure limit. P3 filter: up to a max. of 30 times the expo.

Other protection measures:

Keep away from food, drink and animal feedingstuffs. Take off immediately all contaminated clothing and wash it before reuse. Wear suitable protective clothing. Wash hands before breaks and after work.

8.2.3. Environmental exposure controls

No data available

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state: Liquid Colour: yellow

Odour: Amines

Safety relevant basis data

| parameter | | at °C | Method | Remark |
|--|----------------|-------|--------|--------|
| рН | not determined | | | |
| Melting point | not determined | | | |
| Freezing point | not determined | | | |
| Initial boiling point and boiling range | > 200 °C | | | |
| Decomposition temperature | not determined | | | |
| Flash point | > 100 °C | | | |
| Evaporation rate | not determined | | | |
| Auto-ignition temperature | not determined | | | |
| Upper/lower flammability or explosive limits | not determined | | | |
| Vapour pressure | < 1 hPa | 50 °C | | |
| Vapour density | not determined | | | |
| Density | ≈ 1 g/cm³ | 23 °C | | |
| Bulk density | not determined | | | |
| Water solubility | not determined | | | |
| Partition coefficient: n-octanol/ water | not determined | | | |
| Dynamic viscosity | not determined | | | |
| Kinematic viscosity | not determined | | | |
| flow time | 55 - 75 s | 23 °C | | |

9.2. Other information

No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

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10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

none

10.5. Incompatible materials

Incompatible materials: Strong acid, Alkalis, Oxidising agent

10.6. Hazardous decomposition products

Nitrogen oxides (NOx), Carbon dioxide (CO2), Carbon monoxide

SECTION 11: Toxicological information

11.1. Information on toxicological effects

| CAS No. | Substance name | Toxicological information |
|------------|----------------------------|---------------------------|
| 140-31-8 | 2-piperazin-1-ylethylamine | LD ₅₀ oral: |
| | | 2,110 mg/kg (Rat) |
| | | LD ₅₀ dermal: |
| | | 867 mg/kg (Rabbit) |
| 61788-44-1 | Phenol, styrenated | LD ₅₀ oral: |
| | | >2,000 mg/kg (Rat) |
| | | LD ₅₀ dermal: |
| | | >2,000 mg/kg (Rat) |

Skin corrosion/irritation:

corrosive

Serious eye damage/irritation:

Corrosive

Additional information:

Skin corrosion/irritation, Causes serious eye damage. The product is skin resorptive. Sensitising. Harmful if swallowed. IF INHALED: Do not breathe gas/vapour. Adverse human health effects and symptoms: Dizziness, Headache, Nausea.

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SECTION 12: Ecological information

12.1. Toxicity

| CAS No. | Substance name | Toxicological information |
|------------|----------------------------|--|
| 140-31-8 | 2-piperazin-1-ylethylamine | LC ₅₀ : 2,190 mg/l 4 d (fish, Pimephales promelas (fathead minnow)) OECD 203 EC ₅₀ : 58 mg/l 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202 ErC ₅₀ : >1,000 mg/l 3 d (Algae/water plant, Pseu dokirchneriella subcapitata) OECD 201 EC ₅₀ : 494 mg/l 2 d (Algae/water plant, Selenastr um capricornutum) LC ₅₀ : 368 mg/l 4 d (fish, Poecilia reticulata (Guppy)) |
| 61788-44-1 | Phenol, styrenated | LC ₅₀ : 14.8 mg/l 4 d (fish, Brachydanio rerio (zebra-fish)) OECD 203 EC ₅₀ : >1 - 10 mg/l 2 d (crustaceans, Daphnia magna (Big water flea)) OECD 202 EC ₅₀ : 3.14 mg/l 3 d (Algae/water plant, Scenede smus subspicatus) OECD 201 NOEC: 1.9 mg/l 12 d (fish, Oryzias latipes (Ricef ish)) NOEC: 0.2 mg/l 21 d (crustaceans, Daphnia magna (Big water flea)) |

Aquatic toxicity:

No information available.

Additional ecotoxicological information:

No information available.

12.2. Persistence and degradability

| CAS No. | Substance name | Biodegradation | Remark |
|------------|----------------------------|----------------|--|
| 140-31-8 | 2-piperazin-1-ylethylamine | Yes, slowly | Biodegradation: 0 %, Test duration: 28 d, Method: OECD F |
| 61788-44-1 | Phenol, styrenated | Yes, slowly | Biodegradation: 4 %, Method: 310 |

Additional information:

No information available.

12.3. Bioaccumulative potential

| CAS No. | Substance name | Log K _{OW} | Bioconcentration factor (BCF) |
|------------|----------------------------|---------------------|-------------------------------|
| 140-31-8 | 2-piperazin-1-ylethylamine | -1.48 | |
| 61788-44-1 | Phenol, styrenated | 4 | |

Accumulation / Evaluation:

No information available.

12.4. Mobility in soil

No information available.

12.5. Results of PBT and vPvB assessment

| CAS No. | Substance name | Results of PBT and vPvB assessment |
|------------|----------------------------|------------------------------------|
| 140-31-8 | 2-piperazin-1-ylethylamine | _ |
| 61788-44-1 | Phenol, styrenated | _ |

No information available.

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12.6. Other adverse effects

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Dispose of waste according to applicable legislation.

13.1.1. Product/Packaging disposal

Waste codes/waste designations according to EWC/AVV

Waste code product:

08 01 11 * Waste paint and varnish containing organic solvents or other dangerous substances

SECTION 14: Transport information

| | - | | |
|--|--|---|--|
| Land transport (ADR/RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO- TI / IATA-DGR) |
| 14.1. UN-No. | | | |
| UN 2735 | UN 2735 | UN 2735 | UN 2735 |
| 14.2. UN proper shi | pping 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 , Phenol, styrenated) | POLYAMINES, LIQUID, CORROSIVE, N.O.S. (2-piperazin-1- ylethylamine) |
| 14.3. Transport hazard class(es) | | | |
| 8 9 | 8 9 | 8 9 | 8 |
| | | 0 9 | 0 |
| 14.4. Packing group |) | | |
| III | III | III | III |
| 14.5. Environmental hazards | | | |
| ¥2> | ¥2> | ¥2> | - |
| | | MARINE POLLUTANT | |

^{*:} Evidence for disposal must be provided.

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| Special provisions: E 1 | Land transport (ADR/ RID) | Inland waterway craft (ADN) | Sea transport (IMDG) | Air transport (ICAO- TI / IATA-DGR) |
|--|--|--|--|--|
| 1 Limited quantity (LQ): Remark: Excepted Quantities (EQ): Excepted Quanti | 14.6. Special preca | utions for user | | |
| C7 Remark: | Special provisions: E 1 Limited quantity (LQ): Limited quantity (LQ) 7 Excepted Quantities (EQ): Hazard identificati on number (Kemler No.): 80 Classification code: C7 | Special provisions: E 1 Excepted Quantities (EQ): Classification code: - | Limited quantity (LQ): Limited quantity (LQ) 5 L Excepted Quantities (EQ): EmS-No.: F-A, ; S-B | 1 Excepted Quantities (EQ): |

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code No data available

SECTION 15: Regulatory information

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

15.1.1. EU legislation

No data available

15.1.2. National regulations

[DE] National regulations

Water hazard class (WGK)

WGK:

2 - deutlich wassergefährdend

Berufsgenossenschaftliche Vorschriften (BGV)

Berufsgenossenschaftliche Vorschriften (BGV): D 25 Berufsgenossenschaftliche Informationen (BGI): 595Berufsgenossenschaftliche Regeln (BGR): 227

15.2. Chemical Safety Assessment

For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

16.1. Indication of changes

No data available

16.2. Abbreviations and acronyms

No data available

16.3. Key literature references and sources for data

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16.4. Classification for mixtures and used evaluation method according to regulation (EC) No 1272/2008 [CLP]

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

| Hazard classes and hazard categories | Hazard statements | Classification pro cedure |
|--|--|---------------------------|
| Acute toxicity (oral) (Acute Tox. 4) | H302: Harmful if swallowed. | |
| Acute toxicity (dermal) (Acute Tox. 4) | H312: Harmful in contact with skin. | |
| Skin corrosion/irritation (Skin Corr. 1B) | H314: Causes severe skin burns and eye damage. | |
| Respiratory or skin sensitisation (Skin Sens. 1) | H317: May cause an allergic skin reaction. | |
| Hazardous to the aquatic environment (Aquatic Chronic 2) | H411: Toxic to aquatic life with long lasting effects. | |

16.5. Relevant R-, H- and EUH-phrases (Number and full text)

| Hazard statements | |
|-------------------|--|
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H411 | Toxic to aquatic life with long lasting effects. |
| H412 | Harmful to aquatic life with long lasting effects. |

16.6. Training advice

No data available

16.7. Additional information