



SAFETY DATA SHEET

EG60 Epoxy Tooling Gelcoat

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Compilation date: 25/06/2015

Revision date: 21/03/2017

Revision No: 7

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

1.1. Product identifier

Product name: EG60 Epoxy Tooling Gelcoat

Product code: EP-G60

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

Use of substance / mixture: PC1: Adhesives, sealants. PC9a: Coatings and paints, thinners, paint removers. PC9b: Fillers, putties, plasters, modelling clay. PC32: Polymer preparations and compounds. PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available ERC2: Formulation of preparations* ERC3: Formulation in materials ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

1.3. Details of the supplier of the safety data sheet

Company name: Easy Composites Ltd
Unit 39, Park Hall Business Village
Longton, Stoke on Trent
Staffordshire
ST3 5XA
United Kingdom
Tel: +44 (0) 1782 454499
Email: sales@easycomposites.co.uk

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1.4. Emergency telephone number

Emergency tel: +44 (0) 1782 454499
(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Aquatic Chronic 2: H411; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317

Most important adverse effects: Causes skin irritation. May cause an allergic skin reaction. Causes serious eye irritation.
Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements:

Hazard statements: H315: Causes skin irritation.
H317: May cause an allergic skin reaction.
H319: Causes serious eye irritation.
H411: Toxic to aquatic life with long lasting effects.

Hazard pictograms: GHS07: Exclamation mark
GHS09: Environmental



Signal words: Warning

Precautionary statements: P261: Avoid breathing dust/fumes/gas/mist/vapours/spray.
P264: Wash hands thoroughly after handling.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P302+352: IF ON SKIN: Wash with plenty of water/.
P305+351+338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P321: Specific treatment (see instructions on this label).

2.3. Other hazards

PBT: This product is not identified as a PBT/vPvB substance.

Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

[cont...]

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BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT}

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|------------|-----------|--|---------|
| 500-033-5 | 25068-38-6 | - | Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317; Aquatic Chronic 2: H411 | >50% |

1,3-PROPANEDIOL, 2,2-BIS(HYDROXYMETHYL)-, POLYMER WITH 2-(CHLOROMETHYL)OXRIANE

| | | | | |
|-----------|------------|---|--|-------|
| 608-564-5 | 30973-88-7 | - | Skin Irrit. 2: H315; Eye Irrit. 2: H319; Skin Sens. 1: H317 | 1-25% |
|-----------|------------|---|--|-------|

1,4-BIS(2,3-EPOXYPROPOXY) BUTANE

| | | | | |
|-----------|-----------|---|---|-------|
| 219-371-7 | 2425-79-8 | - | Acute Tox. 4: H332; Acute Tox. 4: H312; Eye Irrit. 2: H319; Skin Irrit. 2: H315; Skin Sens. 1: H317 | 1-25% |
|-----------|-----------|---|---|-------|

PROPYLENE CARBONATE

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|-----------|----------|---|--------------------|-------|
| 203-572-1 | 108-32-7 | - | Eye Irrit. 2: H319 | 1-25% |
|-----------|----------|---|--------------------|-------|

Section 4: First aid measures

4.1. Description of first aid measures

Skin contact: Remove all contaminated clothes and footwear immediately unless stuck to skin. Wash immediately with plenty of soap and water. Consult a doctor.

Eye contact: Bathe the eye with running water for 15 minutes. Consult a doctor.

Ingestion: Wash out mouth with water. Consult a doctor.

Inhalation: Move to fresh air in case of accidental inhalation of vapours. Consult a doctor.

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

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: Nausea and stomach pain may occur.

Inhalation: There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Show this safety data sheet to the doctor in attendance.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Water spray. Water fog. Dry chemical powder. Carbon dioxide. Alcohol or polymer foam. Alcohol resistant foam.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

[cont...]

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5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Mark out the contaminated area with signs and prevent access to unauthorised personnel. Refer to section 8 of SDS for personal protection details.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Mix with sand or vermiculite. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS. Refer to section 13 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Ensure there is sufficient ventilation of the area. Avoid direct contact with the substance.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

Hazardous ingredients:

PROPYLENE CARBONATE

| Type | Exposure | Value | Population | Effect |
|------|------------|-------------|------------|----------|
| DNEL | Inhalation | 70.53 mg/m3 | Workers | Systemic |
| DNEL | Inhalation | 20 mg/m3 | Workers | Local |

[cont...]

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| | | | | |
|------|------------------------------------|------------------------|-----------|----------|
| DNEL | Dermal | 20 mg/kg bw/day | Workers | Systemic |
| DNEL | Inhalation | 17.4 mg/m ³ | Consumers | Systemic |
| DNEL | Inhalation | 10 mg/m ³ | Consumers | Local |
| DNEL | Dermal | 10 mg/kg bw/day | Consumers | Systemic |
| DNEL | Oral | 10 | Consumers | Systemic |
| PNEC | Fresh water | 0.9 mg/l | - | - |
| PNEC | Marine water | 0.09 mg/l | - | - |
| PNEC | Microorganisms in sewage treatment | 7400 mg/l | - | - |
| PNEC | Soil (agricultural) | 0.81 mg/kg d.w. | - | - |

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Self-contained breathing apparatus must be available in case of emergency.

Hand protection: Impermeable gloves.

Eye protection: Safety glasses.

Skin protection: Protective clothing.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Pale yellow

Odour: Characteristic odour

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: No data available.

Viscosity: 1100 mPas (25°C)

Boiling point/range°C: No data available.

Flammability limits %: lower: No data available.

Flash point°C: No data available.

Autoflammability°C: No data available.

Relative density: 1.16 - 1.21

VOC g/l: No data available.

Melting point/range°C: No data available.

upper: No data available.

Part.coeff. n-octanol/water: No data available.

Vapour pressure: No data available.

pH: No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

[cont...]

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10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Polymerisation may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Amines.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

BISPHENOL A-(EPICHLORHYDRIN) {REACTION PRODUCT}

| | | | | |
|-----|-----|------|-------|-------|
| ORL | MUS | LD50 | 15600 | mg/kg |
| ORL | RAT | LD50 | 11400 | mg/kg |
| SKN | RBT | LD50 | >20 | ml/kg |

1,4-BIS(2,3-EPOXYPROPOXY) BUTANE

| | | | | |
|-----|-----|------|------|-------|
| ORL | RAT | LD50 | 1134 | mg/kg |
|-----|-----|------|------|-------|

PROPYLENE CARBONATE

| | | | | |
|--------|-----|------|-------|-------|
| DERMAL | RBT | LD50 | >2000 | mg/kg |
| ORL | RAT | LD50 | 33520 | µl/kg |

Relevant hazards for product:

| Hazard | Route | Basis |
|--------------------------------|-------|-----------------------|
| Skin corrosion/irritation | DRM | Hazardous: calculated |
| Serious eye damage/irritation | OPT | Hazardous: calculated |
| Respiratory/skin sensitisation | DRM | Hazardous: calculated |

Symptoms / routes of exposure

Skin contact: There may be irritation and redness at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: Nausea and stomach pain may occur.

Inhalation: There may be a feeling of tightness in the chest with shortness of breath. Exposure may cause coughing or wheezing.

[cont...]

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Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

1,3-PROPANEDIOL, 2,2-BIS(HYDROXYMETHYL)-, POLYMER WITH 2-(CHLOROMETHYL)OXIRANE

| | | | |
|------------------------------|----------|-----|------|
| Golden Orfe (Leuciscus idus) | 96H LC50 | 460 | mg/l |
|------------------------------|----------|-----|------|

PROPYLENE CARBONATE

| | | | |
|--|----------|--------|------|
| Daphnia magna | 48H EC50 | > 1000 | mg/l |
| FISH (Cyprinus carpio) | 96H LC0 | > 1000 | mg/l |
| GREEN ALGA (Selenastrum capricornutum) | 72H EC50 | > 900 | mg/l |

12.2. Persistence and degradability

Persistence and degradability: No data available.

12.3. Bioaccumulative potential

Bioaccumulative potential: No data available.

12.4. Mobility in soil

Mobility: No data available.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Toxic to aquatic organisms.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN3082

14.2. UN proper shipping name

Shipping name: ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.

[cont...]

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(Epoxy Resin)

14.3. Transport hazard class(es)

Transport class: 9

14.4. Packing group

Packing group: III

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: Yes

14.6. Special precautions for user

Tunnel code: E

Transport category: 3

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: H312: Harmful in contact with skin.

H315: Causes skin irritation.

H317: May cause an allergic skin reaction.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H411: Toxic to aquatic life with long lasting effects.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.

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

1.1. Product identifier

Product name: EG60 Epoxy Tooling Gelcoat Hardener

Product code: EP-G60

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

Use of substance / mixture: PC1: Adhesives, sealants. PC9a: Coatings and paints, thinners, paint removers. PC9b: Fillers, putties, plasters, modelling clay. PC32: Polymer preparations and compounds. PROC1: Use in closed process, no likelihood of exposure PROC2: Use in closed, continuous process with occasional controlled exposure PROC3: Use in closed batch process (synthesis or formulation) PROC4: Use in batch and other process (synthesis) where opportunity for exposure arises PROC5: Mixing or blending in batch processes for formulation of preparations* and articles (multistage and/or significant contact) PROC8a: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at non-dedicated facilities PROC8b: Transfer of substance or preparation (charging/discharging) from/to vessels/large containers at dedicated facilities PROC9: Transfer of substance or preparation into small containers (dedicated filling line, including weighing) PROC10: Roller application or brushing PROC13: Treatment of articles by dipping and pouring PROC19: Hand-mixing with intimate contact and only PPE available ERC2: Formulation of preparations* ERC3: Formulation in materials ERC5: Industrial use resulting in inclusion into or onto a matrix ERC6d: Industrial use of process regulators for polymerisation processes in production of resins, rubbers, polymers

1.3. Details of the supplier of the safety data sheet

Company name: Easy Composites Ltd
Unit 39, Park Hall Business Village
Longton, Stoke on Trent
Staffordshire
ST3 5XA
United Kingdom
Tel: +44 (0) 1782 454499
Email: sales@easycomposites.co.uk

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1.4. Emergency telephone number

Emergency tel: +44 (0) 1782 454499
(office hours only)

Section 2: Hazards identification

2.1. Classification of the substance or mixture

Classification under CLP: Acute Tox. 4: H302; Aquatic Acute 1: H400; Aquatic Chronic 1: H410; Aquatic Chronic 2: H411; Skin Corr. 1B: H314; Skin Sens. 1: H317; STOT RE 2: H373

Most important adverse effects: Harmful if swallowed. Causes severe skin burns and eye damage. May cause an allergic skin reaction. May cause damage to organs through prolonged or repeated exposure. Very toxic to aquatic life. Very toxic to aquatic life with long lasting effects. Toxic to aquatic life with long lasting effects.

2.2. Label elements

Label elements:

Hazard statements: H302: Harmful if swallowed.
H314: Causes severe skin burns and eye damage.
H317: May cause an allergic skin reaction.
H373: May cause damage to organs through prolonged or repeated exposure.
H400: Very toxic to aquatic life.
H410: Very toxic to aquatic life with long lasting effects.
H411: Toxic to aquatic life with long lasting effects.

Hazard pictograms: GHS05: Corrosion
GHS07: Exclamation mark
GHS08: Health hazard
GHS09: Environmental



Signal words: Danger

Precautionary statements: P260: Do not breathe dust/fumes/gas/mist/vapours/spray.
P280: Wear protective gloves/protective clothing/eye protection/face protection.
P301+312: IF SWALLOWED: Call a doctor if you feel unwell.
P301+330+331: IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
P302+352: IF ON SKIN: Wash with plenty of water/.
P303+361+353: IF ON SKIN (or hair): Take off immediately all contaminated clothing.
Rinse skin with water/shower.

2.3. Other hazards

Other hazards: Danger of serious damage to health by prolonged exposure.
PBT: This product is not identified as a PBT/vPvB substance.

[cont...]

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Section 3: Composition/information on ingredients

3.2. Mixtures

Hazardous ingredients:

PENTAETHYLENEHEXAMINE - REACH registered number(s): 01-2119485826-22

| EINECS | CAS | PBT / WEL | CLP Classification | Percent |
|-----------|-----------|-----------|---|---------|
| 223-775-9 | 4067-16-7 | - | Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 1: H410; Aquatic Acute 1: H400 | >50% |

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION - REACH registered number(s): 01-2119487919-13

| | | | | |
|-----------|------------|---|--|-------|
| 292-588-2 | 90640-67-8 | - | Acute Tox. 4: H312; Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 3: H412; Eye Dam. 1: H318; Acute Tox. 4: H302 | 1-25% |
|-----------|------------|---|--|-------|

HEPA

| | | | | |
|-----------|------------|---|---|-------|
| 268-626-9 | 68131-73-7 | - | Acute Tox. 4: H312; Acute Tox. 4: H302; Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 1: H410; Aquatic Acute 1: H400 | 1-25% |
|-----------|------------|---|---|-------|

BENZYL ALCOHOL - REACH registered number(s): 01-2119492630-38

| | | | | |
|-----------|----------|---|--|-------|
| 202-859-9 | 100-51-6 | - | Acute Tox. 4: H332; Acute Tox. 4: H302 | 1-25% |
|-----------|----------|---|--|-------|

3,6,9-TRIAZAUNDECAMETHYLENEDIAMINE

| | | | | |
|-----------|----------|---|--|-------|
| 203-986-2 | 112-57-2 | - | Acute Tox. 4: H312; Acute Tox. 4: H302; Skin Corr. 1B: H314; Skin Sens. 1: H317; Aquatic Chronic 2: H411 | 1-25% |
|-----------|----------|---|--|-------|

AMINOETHYLPIPERAZINE - REACH registered number(s): 01-2119471486-30

| | | | | |
|-----------|----------|---|--|-------|
| 205-411-0 | 140-31-8 | - | Acute Tox. 4: H302; Acute Tox. 3: H311; Skin Corr. 1B: H314; Eye Dam. 1: H318; Skin Sens. 1: H317; Repr. 2: H361; STOT RE 1: H372; Aquatic Chronic 3: H412 | 1-25% |
|-----------|----------|---|--|-------|

2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL - REACH registered number(s): 01-2119560597-27

| | | | | |
|-----------|---------|---|---|-------|
| 202-013-9 | 90-72-2 | - | Acute Tox. 4: H302; Eye Irrit. 2: H319; Skin Irrit. 2: H315 | 1-25% |
|-----------|---------|---|---|-------|

PHENOL, STYRENATED - REACH registered number(s): 01-2119980970-27

| | | | | |
|-----------|------------|---|--|-------|
| 262-975-0 | 61788-44-1 | - | Skin Irrit. 2: H315; Skin Sens. 1: H317; Aquatic Chronic 2: H411 | 1-25% |
|-----------|------------|---|--|-------|

Section 4: First aid measures

[cont...]

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4.1. Description of first aid measures

Skin contact: Wash immediately with plenty of soap and water.

Eye contact: Bathe the eye with running water for 15 minutes.

Ingestion: Wash out mouth with water. Do not induce vomiting. If conscious, give half a litre of water to drink immediately. Transfer to hospital as soon as possible.

Inhalation: Remove casualty from exposure ensuring one's own safety whilst doing so. Consult a doctor.

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

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

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

Immediate / special treatment: Not applicable.

Section 5: Fire-fighting measures

5.1. Extinguishing media

Extinguishing media: Suitable extinguishing media for the surrounding fire should be used. Use water spray to cool containers.

5.2. Special hazards arising from the substance or mixture

Exposure hazards: In combustion emits toxic fumes.

5.3. Advice for fire-fighters

Advice for fire-fighters: Wear self-contained breathing apparatus. Wear protective clothing to prevent contact with skin and eyes.

Section 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Personal precautions: Refer to section 8 of SDS for personal protection details. Mark out the contaminated area with signs and prevent access to unauthorised personnel. Turn leaking containers leak-side up to prevent the escape of liquid.

6.2. Environmental precautions

Environmental precautions: Do not discharge into drains or rivers. Contain the spillage using bunding.

6.3. Methods and material for containment and cleaning up

Clean-up procedures: Absorb into dry earth or sand. Transfer to a closable, labelled salvage container for disposal by an appropriate method.

[cont...]

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6.4. Reference to other sections

Reference to other sections: Refer to section 8 of SDS.

Section 7: Handling and storage

7.1. Precautions for safe handling

Handling requirements: Avoid the formation or spread of mists in the air. Avoid direct contact with the substance.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions: Store in a cool, well ventilated area. Keep container tightly closed.

Suitable packaging: Must only be kept in original packaging.

7.3. Specific end use(s)

Specific end use(s): No data available.

Section 8: Exposure controls/personal protection

8.1. Control parameters

Workplace exposure limits: No data available.

DNEL/PNEC Values

Hazardous ingredients:

PENTAETHYLENEHEXAMINE

| Type | Exposure | Value | Population | Effect |
|------|------------------------------------|--------------------------|------------|----------|
| PNEC | Fresh water | 2.5 µg/l | - | - |
| PNEC | Marine water | 2.5 µg/l | - | - |
| PNEC | Fresh water sediments | 0.22 mg/kg dwt | - | - |
| PNEC | Marine sediments | 0.14 mg/kg dwt | - | - |
| PNEC | Soil (agricultural) | 0.18 mg/kg dwt | - | - |
| PNEC | Microorganisms in sewage treatment | 1.64 mg/l | - | - |
| DNEL | Inhalation | 8550 mg/m ³ | Workers | Systemic |
| DNEL | Inhalation (repeated dose) | 1.59 mg/m ³ | Workers | Systemic |
| DNEL | Dermal (repeated dose) | 0.91 mg/kg bw/day | Workers | Systemic |
| DNEL | Dermal (repeated dose) | 0.044 mg/cm ² | Workers | Local |
| DNEL | Inhalation | 2542 mg/m ³ | Consumers | Systemic |
| DNEL | Inhalation (repeated dose) | 0.46 mg/m ³ | Consumers | Systemic |
| DNEL | Dermal (repeated dose) | 0.4 mg/kg bw/day | Consumers | Systemic |
| DNEL | Oral (repeated dose) | 0.65 mg/kg bw/day | Consumers | Systemic |
| DNEL | Dermal | 13 mg/kg bw/day | Consumers | Systemic |

[cont...]

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| | | | | |
|------|------------------------|-------------------------|-----------|----------|
| DNEL | Oral | 32 mg/kg bw/day | Consumers | Systemic |
| DNEL | Dermal | 1.59 mg/cm ² | Consumers | Local |
| DNEL | Dermal (repeated dose) | 0.68 mg/cm ² | Consumers | Local |

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

| Type | Exposure | Value | Population | Effect |
|------|------------------------------------|-------------------------|------------|----------|
| DNEL | Inhalation | 5380 mg/m ³ | Workers | Systemic |
| DNEL | Dermal (repeated dose) | 0.57 mg/kg bw/day | Workers | Systemic |
| DNEL | Inhalation (repeated dose) | 1 mg/m ³ | Workers | Systemic |
| DNEL | Dermal (repeated dose) | 0.028 mg/m ³ | Workers | Local |
| DNEL | Dermal | 8 mg/kg bw/day | Consumers | Systemic |
| DNEL | Inhalation | 1600 mg/m ³ | Consumers | Systemic |
| DNEL | Oral | 20 mg/kg bw/day | Consumers | Systemic |
| DNEL | Dermal | 1 mg/cm ² | Consumers | Local |
| DNEL | Dermal | 0.25 mg/kg bw/day | Consumers | Local |
| DNEL | Inhalation (repeated dose) | 0.29 mg/m ³ | Consumers | Systemic |
| DNEL | Oral (repeated dose) | 0.41 mg/kg bw/day | Consumers | Systemic |
| DNEL | Dermal (repeated dose) | 0.43 mg/cm ² | Consumers | Local |
| PNEC | Fresh water | 190 ug/l | - | - |
| PNEC | Fresh water sediments | 95.9 mg/kg | - | - |
| PNEC | Marine water | 38 ug/l | - | - |
| PNEC | Marine sediments | 19.2 mg/kg | - | - |
| PNEC | Soil (agricultural) | 19.1 mg/kg | - | - |
| PNEC | Microorganisms in sewage treatment | 4.25 mg/l | - | - |

BENZYL ALCOHOL

| Type | Exposure | Value | Population | Effect |
|------|------------------------------------|------------------------|------------|----------|
| DNEL | Dermal | 9.5 mg/kg bw/day | Workers | Systemic |
| DNEL | Inhalation | 90 mg/m ³ | Workers | Systemic |
| DNEL | Dermal | 5.7 mg/kg bw/day | Consumers | Systemic |
| DNEL | Inhalation | 8.11 mg/m ³ | Consumers | Systemic |
| DNEL | Oral | 5 mg/kg bw/day | Consumers | Systemic |
| PNEC | Fresh water | 1 mg/l | - | - |
| PNEC | Marine water | 0.1 mg/l | - | - |
| PNEC | Microorganisms in sewage treatment | 39 mg/l | - | - |
| PNEC | Fresh water sediments | 5.27 mg/kg | - | - |
| PNEC | Marine sediments | 0.527 mg/kg | - | - |

[cont...]

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| | | | | |
|------|---------------------|-------------|---|---|
| PNEC | Soil (agricultural) | 0.456 mg/kg | - | - |
|------|---------------------|-------------|---|---|

3,6,9-TRIAZAUNDECAMETHYLENEDIAMINE

| Type | Exposure | Value | Population | Effect |
|------|------------------------------------|-------------|------------|--------|
| PNEC | Fresh water | 0.0068 mg/l | - | - |
| PNEC | Marine water | 0.0068 mg/l | - | - |
| PNEC | Fresh water sediments | 0.341 mg/kg | - | - |
| PNEC | Marine sediments | 0.746 mg/kg | - | - |
| PNEC | Soil (agricultural) | 0.274 mg/kg | - | - |
| PNEC | Microorganisms in sewage treatment | 4.6 mg/l | - | - |

AMINOETHYLPIPERAZINE

| Type | Exposure | Value | Population | Effect |
|------|------------------------------------|------------------------|------------|----------|
| DNEL | Inhalation | 21.4 mg/m ³ | Workers | Systemic |
| DNEL | Inhalation | 5.3 mg/m ³ | Consumers | Systemic |
| PNEC | Fresh water | 0.058 mg/l | - | - |
| PNEC | Marine water | 0.0058 mg/l | - | - |
| PNEC | Fresh water sediments | 215 mg/kg | - | - |
| PNEC | Marine sediments | 21.5 mg/kg | - | - |
| PNEC | Soil (agricultural) | 42.9 mg/kg | - | - |
| PNEC | Microorganisms in sewage treatment | 250 mg/l | - | - |

8.2. Exposure controls

Engineering measures: Ensure there is sufficient ventilation of the area.

Respiratory protection: Respiratory protection not required.

Hand protection: Protective gloves.

Eye protection: Safety glasses. Ensure eye bath is to hand.

Skin protection: Protective clothing.

Environmental: The floor of the storage room must be impermeable to prevent the escape of liquids.

Section 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

State: Liquid

Colour: Yellow-orange

Odour: Unpleasant

Evaporation rate: No data available.

Oxidising: No data available.

Solubility in water: No data available.

Viscosity: 45 mPas (25°C)

Boiling point/range°C: No data available.

Melting point/range°C: No data available.

Flammability limits %: lower: No data available.

[cont...]

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Flash point°C: No data available. **upper:** No data available.
Autoflammability°C: No data available. **Part.coeff. n-octanol/water:** No data available.
Relative density: 0.96 - 1.01 **Vapour pressure:** No data available.
VOC g/l: No data available. **pH:** No data available.

9.2. Other information

Other information: No data available.

Section 10: Stability and reactivity

10.1. Reactivity

Reactivity: Stable under recommended transport or storage conditions.

10.2. Chemical stability

Chemical stability: Stable under normal conditions.

10.3. Possibility of hazardous reactions

Hazardous reactions: Hazardous reactions will not occur under normal transport or storage conditions.
Decomposition may occur on exposure to conditions or materials listed below.

10.4. Conditions to avoid

Conditions to avoid: Heat.

10.5. Incompatible materials

Materials to avoid: Strong oxidising agents. Strong acids.

10.6. Hazardous decomposition products

Haz. decomp. products: In combustion emits toxic fumes.

Section 11: Toxicological information

11.1. Information on toxicological effects

Hazardous ingredients:

PENTAETHYLENEHEXAMINE

| | | | | |
|--------|-----|------|--------|-------|
| DERMAL | RBT | LD50 | 1465.4 | mg/kg |
| ORL | RAT | LD50 | 1600 | mg/kg |

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

| | | | | |
|--------|-----|------|------|-------|
| DERMAL | RBT | LD50 | 1465 | mg/kg |
| ORAL | RAT | LD50 | 1716 | mg/kg |

[cont...]

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BENZYL ALCOHOL

| | | | | |
|-----------|-----|---------|-------|-------|
| DERMAL | RBT | LD50 | 1260 | mg/kg |
| DUST/MIST | RAT | 4H LC50 | >4178 | mg/kg |
| IVN | RAT | LD50 | 53 | mg/kg |
| ORAL | RBT | LD50 | 1040 | mg/kg |
| ORL | MUS | LD50 | 1040 | mg/kg |
| ORL | RAT | LD50 | 1230 | mg/kg |

3,6,9-TRIAZAUNDECAMETHYLENEDIAMINE

| | | | | |
|-----|-----|------|------|-------|
| IPR | RAT | LD50 | 205 | mg/kg |
| IVN | MUS | LD50 | 320 | mg/kg |
| ORL | RAT | LD50 | 3990 | mg/kg |

AMINOETHYLPIPERAZINE

| | | | | |
|--------|-----|------|------|-------|
| DERMAL | RBT | LD50 | 866 | mg/kg |
| ORAL | RBT | LD50 | 2097 | mg/kg |

2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

| | | | | |
|------|-----|------|------|-------|
| ORAL | RAT | LD50 | 2169 | mg/kg |
|------|-----|------|------|-------|

PHENOL, STYRENATED

| | | | | |
|--------|-----|------|-------|-------|
| DERMAL | RAT | LD50 | >2000 | mg/kg |
| ORAL | RAT | LD50 | >2001 | mg/kg |

Relevant hazards for product:

| Hazard | Route | Basis |
|--------------------------------|-------|-----------------------|
| Acute toxicity (ac. tox. 4) | ING | Hazardous: calculated |
| Skin corrosion/irritation | DRM | Hazardous: calculated |
| Serious eye damage/irritation | OPT | Hazardous: calculated |
| Respiratory/skin sensitisation | DRM | Hazardous: calculated |
| STOT-repeated exposure | - | Hazardous: calculated |

Symptoms / routes of exposure

Skin contact: There may be mild irritation at the site of contact.

Eye contact: There may be irritation and redness.

Ingestion: There may be soreness and redness of the mouth and throat. There may be difficulty swallowing. Nausea and stomach pain may occur. There may be vomiting.

Inhalation: Absorption through the lungs can occur causing symptoms similar to those of ingestion.

Delayed / immediate effects: Immediate effects can be expected after short-term exposure.

[cont...]

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Section 12: Ecological information

12.1. Toxicity

Hazardous ingredients:

PENTAETHYLENEHEXAMINE

| | | | |
|----------|----------|------|------|
| ALGAE | 72H EC50 | 0.7 | mg/l |
| BACTERIA | 2H EC50 | 164 | mg/l |
| DAPHNIA | 48H EC50 | 17.5 | mg/l |
| FISH | 96H LC50 | 180 | mg/l |

AMINES, POLYETHYLENEPOLY-, TRIETHYLENETETRAMINE FRACTION

| | | | |
|---------|-----------|------|------|
| - | 48H EC50 | 3.7 | mg/l |
| ALGAE | 72H ErC50 | 20 | mg/l |
| DAPHNIA | 48H EC50 | 31.1 | mg/l |
| FISH | 96H LC50 | 330 | mg/l |

BENZYL ALCOHOL

| | | | |
|---------|-----------|-----|------|
| ALGAE | 72H EgC50 | 770 | mg/l |
| ALGAE | 72H NOEC | 310 | mg/l |
| DAPHNIA | 21D NOEC | 51 | mg/l |
| DAPHNIA | 48H EC50 | 230 | mg/l |
| FISH | 96H LC50 | 460 | mg/l |

3,6,9-TRIAZAUNDECAMETHYLENEDIAMINE

| | | | |
|---------|-----------|------|------|
| ALGAE | 72H ErC50 | 6.8 | mg/l |
| DAPHNIA | 48H EC50 | 24.1 | mg/l |
| FISH | 96H LC50 | 420 | mg/l |

AMINOETHYLPIPERAZINE

| | | | |
|--|----------|--------|------|
| Daphnia magna | 48H EC50 | 58 | mg/l |
| FISH | 96H LC50 | 2190 | mg/l |
| GREEN ALGA (Selenastrum capricornutum) | 72H EC50 | > 1000 | mg/l |

2,4,6-TRIS(DIMETHYLAMINOMETHYL)PHENOL

| | | | |
|-------------------------------------|----------|-----|------|
| COMMON CARP (Cyprinus carpio) | 96H LC50 | 175 | mg/l |
| COMMON CARP (Cyprinus carpio) | 24H LC50 | 249 | mg/l |
| RAINBOW TROUT (Oncorhynchus mykiss) | 24H LC50 | 222 | mg/l |

[cont...]

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| | | | |
|--|-----------|-----|------|
| RAINBOW TROUT (<i>Oncorhynchus mykiss</i>) | 96H LC0 | 180 | mg/l |
| RAINBOW TROUT (<i>Oncorhynchus mykiss</i>) | 96H LC100 | 240 | mg/l |
| Scenedesmus Subspicatus | 72H EC50 | 84 | mg/l |

PHENOL, STYRENATED

| | | | |
|---------------------------------|----------|--------|------|
| ALGAE (<i>Scenedesmus</i> sp.) | 72H EL50 | 3.14 | mg/l |
| Daphnia magna | 48H EL50 | 1 - 10 | mg/l |
| FISH | 96H LL50 | 14.8 | mg/l |

12.2. Persistence and degradability

Persistence and degradability: Biodegradable.

12.3. Bioaccumulative potential

Bioaccumulative potential: No bioaccumulation potential.

12.4. Mobility in soil

Mobility: Readily absorbed into soil.

12.5. Results of PBT and vPvB assessment

PBT identification: This product is not identified as a PBT/vPvB substance.

12.6. Other adverse effects

Other adverse effects: Negligible ecotoxicity.

Section 13: Disposal considerations

13.1. Waste treatment methods

Disposal operations: Transfer to a suitable container and arrange for collection by specialised disposal company.

Disposal of packaging: Arrange for collection by specialised disposal company.

NB: The user's attention is drawn to the possible existence of regional or national regulations regarding disposal.

Section 14: Transport information

14.1. UN number

UN number: UN2735

14.2. UN proper shipping name

Shipping name: AMINES, LIQUID, CORROSIVE, N.O.S.
(Contains: TRIETHYLENETETRAMINE)

14.3. Transport hazard class(es)

Transport class: 8

[cont...]

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14.4. Packing group

Packing group: II

14.5. Environmental hazards

Environmentally hazardous: Yes

Marine pollutant: Yes

14.6. Special precautions for user

Special precautions: No special precautions.

Tunnel code: E

Transport category: 2

Section 15: Regulatory information

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

Specific regulations: Not applicable.

15.2. Chemical Safety Assessment

Chemical safety assessment: A chemical safety assessment has not been carried out for the substance or the mixture by the supplier.

Section 16: Other information

Other information

Other information: This safety data sheet is prepared in accordance with Commission Regulation (EU) No 2015/830.

* indicates text in the SDS which has changed since the last revision.

Phrases used in s.2 and s.3: 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.

H319: Causes serious eye irritation.

H332: Harmful if inhaled.

H361: Suspected of damaging fertility or the unborn child <state specific effect if known>
<state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H372: Causes damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that no other routes of exposure cause the hazard>.

H373: May cause damage to organs <or state all organs affected, if known> through prolonged or repeated exposure <state route of exposure if it is conclusively proven that

[cont...]

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no other routes of exposure cause the hazard>.

H400: Very toxic to aquatic life.

H410: Very toxic to aquatic life with long lasting effects.

H411: Toxic to aquatic life with long lasting effects.

H412: Harmful to aquatic life with long lasting effects.

Legal disclaimer: The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. This company shall not be held liable for any damage resulting from handling or from contact with the above product.