

EL160 High Temperature Epoxy Resin

Safety Data Sheet

according to the REACH Regulation (EC) 1907/2006 amended by Regulation (EU) 2020/878
Revision date: 17/06/2025 Version: 11.0

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

1.1. Product identifier

Product form : Mixture
Trade name : EL160 High Temperature Epoxy Resin
Product code : EL160-A
UFI : 3S45-V9E6-E003-1HQ1

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

Relevant identified uses

Main use category : Industrial use, Professional use
Use of the substance/mixture : Casting compound

1.3. Details of the supplier of the safety data sheet

Easy Composites Ltd
Unit 39, Park Hall Business Village, Stoke on Trent,
Staffordshire,
ST3 5XA.
United Kingdom.

Tel: +44 (0)1782 454499 -
sales@easycomposites.com

1.4. Emergency telephone number

Emergency number : +44 (0)1782 454499 (working hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

| | |
|---|-------|
| Skin corrosion/irritation, Category 2 | H315 |
| Serious eye damage/eye irritation, Category 1 | H318 |
| Skin sensitisation, Category 1 | H317 |
| Germ cell mutagenicity, Category 2 | H341 |
| Reproductive toxicity, Category 1B | H360F |
| Hazardous to the aquatic environment – Chronic Hazard, Category 2 | H411 |

Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

Suspected of causing genetic defects. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Toxic to aquatic life with long lasting effects.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

GHS08

GHS09

Signal word (CLP) :

Danger

Contains :

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol/BPFDEGE; bis-[4-(2,3-epoxypropoxy)phenyl]propane; TGMEDA, multifunctional epoxide; N,N-Diglycidyl aniline; [3-(2,3-epoxypropoxy)propyl]trimethoxysilane; 1,4-bis(2,3-epoxypropoxy)butane; butanedioldiglycidyl ether

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| | |
|--------------------------------|--|
| Hazard statements (CLP) | : H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H341 - Suspected of causing genetic defects. H360F - May damage fertility. H411 - Toxic to aquatic life with long lasting effects. |
| Precautionary statements (CLP) | : P201 - Obtain special instructions before use. P280 - Wear protective gloves, protective clothing, eye protection. P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor. P308+P313 - IF exposed or concerned: Get medical advice/attention. P321 - Specific treatment (see supplemental first aid instruction on this label). P391 - Collect spillage. |

2.3. Other hazards

Contains no PBT and/or vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or substance(s) are not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

| Component | |
|---|---|
| Substance(s) not included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 | bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3) |

SECTION 3: Composition/information on ingredients

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|---------|--|
| N,N-Diglycidyl aniline | CAS-No.: 2095-06-9 EC-No.: 218-259-5 REACH-no: 01-2120782027-53 | 25 – 50 | Acute Tox. 4 (Oral), H302 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Muta. 2, H341 |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol/BPFDGE | CAS-No.: 9003-36-5 EC-No.: 701-263-0 REACH-no: 01-2119454392-40 | 25 – 50 | Skin Irrit. 2, H315 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |
| TGMDA, multifunctional epoxide | CAS-No.: 28768-32-3 EC-No.: 249-204-3 REACH-no: 01-2119472303-45 | 1 – 25 | Skin Sens. 1, H317 Aquatic Chronic 2, H411 |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane | CAS-No.: 1675-54-3 EC-No.: 216-823-5 EC Index-No.: 603-073-00-2 REACH-no: 01-2119456619-26 | 1 – 25 | Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Aquatic Chronic 2, H411 |

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| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|---|---|--------|---|
| 1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether | CAS-No.: 2425-79-8 EC-No.: 219-371-7 EC Index-No.: 603-072-00-7 REACH-no: 01-2119494060-45 | 1 – 25 | Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Dermal), H312 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1, H317 Repr. 1B, H360F |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane | CAS-No.: 2530-83-8 EC-No.: 219-784-2 | 1 – 25 | Eye Dam. 1, H318 |

Specific concentration limits:

| Name | Product identifier | Specific concentration limits (%) |
|---|---|---|
| bis-[4-(2,3-epoxypropoxy)phenyl]propane | CAS-No.: 1675-54-3 EC-No.: 216-823-5 EC Index-No.: 603-073-00-2 REACH-no: 01-2119456619-26 | (5 ≤ C ≤ 100) Eye Irrit. 2; H319 (5 ≤ C ≤ 100) Skin Irrit. 2; H315 |

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|---------------------------------------|--|
| First-aid measures general | : IF exposed or concerned: Get medical advice/attention. |
| First-aid measures after inhalation | : Remove person to fresh air and keep comfortable for breathing. |
| First-aid measures after skin contact | : Wash skin with plenty of water. Take off contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention. |
| First-aid measures after eye contact | : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately. |
| First-aid measures after ingestion | : Call a poison center or a doctor if you feel unwell. |

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

| | |
|-------------------------------------|--|
| Symptoms/effects after skin contact | : Irritation. May cause an allergic skin reaction. |
| Symptoms/effects after eye contact | : Serious damage to eyes. |

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

| | |
|------------------------------|--|
| Suitable extinguishing media | : Water spray. Dry powder. Foam. Carbon dioxide. |
|------------------------------|--|

5.2. Special hazards arising from the substance or mixture

| | |
|--|--------------------------------|
| Hazardous decomposition products in case of fire | : Toxic fumes may be released. |
|--|--------------------------------|

5.3. Advice for firefighters

| | |
|--------------------------------|--|
| Protection during firefighting | : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing. |
|--------------------------------|--|

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SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel

Emergency procedures : Ventilate spillage area. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray.

For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment : Collect spillage.
Methods for cleaning up : Take up liquid spill into absorbent material. Notify authorities if product enters sewers or public waters.
Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin and eyes. Wear personal protective equipment. Avoid breathing dust/fume/gas/mist/vapours/spray.
Hygiene measures : Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store locked up. Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

No additional information available

8.2. Exposure controls

Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

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Personal protection equipment

Personal protective equipment symbol(s):



Eye and face protection

Eye protection:

Safety glasses

Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

Respiratory protection

Respiratory protection:

[In case of inadequate ventilation] wear respiratory protection.

Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|---|---|
| Physical state | : Liquid |
| Colour | : clear. |
| Odour | : characteristic. |
| Odour threshold | : Not available |
| Melting point | : Not applicable |
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Not applicable |
| Lower explosion limit | : Not available |
| Upper explosion limit | : Not available |
| Flash point | : Not available |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : Not available |
| Viscosity, kinematic | : 833.333 – 1363.636 mm ² /s |
| Viscosity, dynamic | : 1000 – 1500 mPa·s (25°C) |
| Solubility | : Not available |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |
| Vapour pressure at 50°C | : Not available |
| Density | : 1.1 – 1.2 g/cm ³ (25°C) |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not available |
| Particle characteristics | : Not applicable |

9.2. Other information

No additional information available

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SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

Acute toxicity (oral) : Not classified
Acute toxicity (dermal) : Not classified
Acute toxicity (inhalation) : Not classified

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol/BPFDGE (9003-36-5)

| | |
|-----------------|--|
| LD50 oral rat | > 2000 mg/kg |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other: |

bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3)

| | |
|--------------------|--|
| LD50 oral rat | > 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 420 (Acute Oral Toxicity - Fixed Dose Method) |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)) |
| LD50 dermal rabbit | 20000 mg/kg |

TGMDA, multifunctional epoxide (28768-32-3)

| | |
|--------------------|--|
| LD50 oral rat | > 5000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 401 (Acute Oral Toxicity) |
| LD50 oral | > 5000 mg/kg bodyweight Animal: mouse, Guideline: OECD Guideline 401 (Acute Oral Toxicity) |
| LD50 dermal rabbit | > 3000 mg/kg bodyweight Animal: rabbit |

N,N-Diglycidyl aniline (2095-06-9)

| | |
|-----------------|--|
| LD50 oral rat | 1620 mg/kg |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal)), Guideline: EPA OPPTS 870.1200 (Acute Dermal Toxicity), Guideline: other: |

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| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8) | |
|--|---|
| LD50 oral rat | 7010 mg/kg Source: SIDS |
| LD50 dermal rabbit | 3970 mg/kg Source: SIDS |
| LC50 Inhalation - Rat | > 5.3 mg/l air Animal: rat, Guideline: OECD Guideline 403 (Acute Inhalation Toxicity) |
| LC50 Inhalation - Rat (Vapours) | > 5.3 mg/l Source: SIDS |
| 1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether (2425-79-8) | |
| LD50 oral rat | 1163 mg/kg |
| LD50 dermal rat | > 2150 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other: |
| LD50 dermal rabbit | > 2150 mg/kg |
| Skin corrosion/irritation | : Causes skin irritation. |
| TGMDA, multifunctional epoxide (28768-32-3) | |
| pH | 7.1 – 7.3 Temp.: 20 °C Concentration: (>=)10 mg/L |
| Serious eye damage/irritation | : Causes serious eye damage. |
| TGMDA, multifunctional epoxide (28768-32-3) | |
| pH | 7.1 – 7.3 Temp.: 20 °C Concentration: (>=)10 mg/L |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Suspected of causing genetic defects. |
| Carcinogenicity | : Not classified |
| bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3) | |
| NOAEL (chronic, oral, animal/male, 2 years) | 15 mg/kg bodyweight Animal: rat, Animal sex: male, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Guideline: EPA OPPTS 870.4300 (Combined Chronic Toxicity / Carcinogenicity), Guideline: other:, Remarks on results: other: |
| NOAEL (chronic, oral, animal/female, 2 years) | 100 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 453 (Combined Chronic Toxicity / Carcinogenicity Studies), Guideline: EPA OPPTS 870.4300 (Combined Chronic Toxicity / Carcinogenicity), Guideline: other:, Remarks on results: other: |
| IARC group | 3 - Not classifiable |
| Reproductive toxicity | : May damage fertility. |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : Not classified |
| Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol/BPFDGE (9003-36-5) | |
| NOAEL (oral, rat, 90 days) | ≈ 250 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| [3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8) | |
| NOAEL (oral, rat, 90 days) | ≥ 1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: EU Method B.26 (Sub-Chronic Oral Toxicity Test: Repeated Dose 90-Day Oral Toxicity Study in Rodents), Guideline: other: |
| 1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether (2425-79-8) | |
| LOAEL (oral, rat, 90 days) | 200 mg/kg bodyweight/day |
| Aspiration hazard | : Not classified |
| Alchemix EP 574 | |
| Viscosity, kinematic | 833.333 – 1363.636 mm ² /s |

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[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)

| | |
|----------------------|--|
| Viscosity, kinematic | 3.43 mm ² /s Temp.: '20°C' Parameter: 'kinematic viscosity (in mm ² /s)' |
|----------------------|--|

1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether (2425-79-8)

| | |
|----------------------|--------------------------------|
| Viscosity, kinematic | 10.909 – 20 mm ² /s |
|----------------------|--------------------------------|

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute) : Not classified
Hazardous to the aquatic environment, long-term (chronic) : Toxic to aquatic life with long lasting effects.

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol/BPFDGE (9003-36-5)

| | |
|----------------------|--|
| LC50 - Fish [1] | 2.54 mg/l <i>Leuciscus idus</i> (golden orfe) |
| EC50 - Crustacea [1] | 2.55 mg/l <i>Daphnia magna</i> (Water flea) |
| EC50 72h - Algae [1] | 1.8 mg/l |
| LOEC (chronic) | 1 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d' |
| NOEC (chronic) | 0.3 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d' |

bis-[4-(2,3-epoxypropoxy)phenyl]propane (1675-54-3)

| | |
|----------------------|--|
| LC50 - Fish [1] | 1.2 mg/l Test organisms (species): <i>Oncorhynchus mykiss</i> (previous name: <i>Salmo gairdneri</i>) |
| EC50 72h - Algae [1] | 9.4 mg/l Test organisms (species): <i>Scenedesmus capricornutum</i> |
| EC50 72h - Algae [2] | > 11 mg/l Test organisms (species): <i>Scenedesmus capricornutum</i> |
| LOEC (chronic) | 1 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d' |
| NOEC (chronic) | 0.3 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d' |

TGMDA, multifunctional epoxide (28768-32-3)

| | |
|----------------------|---|
| LC50 - Fish [1] | 2.454 mg/l Source: Ecological Structure Activity Relationships |
| EC50 - Crustacea [1] | 14.682 mg/l <i>Daphnia magna</i> (Water flea) |
| EC50 96h - Algae [1] | 38.234 mg/l Source: Ecological Structure Activity Relationships |

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)

| | |
|----------------------|---|
| LC50 - Fish [1] | 237 mg/l Source: SIDS |
| EC50 - Crustacea [1] | 710 mg/l Source: SIDS |
| EC50 96h - Algae [1] | 350 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>) |
| EC50 96h - Algae [2] | 250 mg/l Test organisms (species): <i>Pseudokirchneriella subcapitata</i> (previous names: <i>Raphidocelis subcapitata</i> , <i>Selenastrum capricornutum</i>) |
| ErC50 algae | 350 mg/l Source: SIDS |
| LOEC (chronic) | > 100 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d' |
| NOEC (chronic) | ≥ 100 mg/l Test organisms (species): <i>Daphnia magna</i> Duration: '21 d' |

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1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether (2425-79-8)

| | |
|----------------------|---|
| LC50 - Fish [1] | 19.8 mg/l |
| EC50 - Crustacea [1] | 22 mg/l Source: National Institute of Technology and Evaluation |
| EC50 72h - Algae [1] | > 93 mg/l Source: National Institute of Technology and Evaluation |

12.2. Persistence and degradability

Alchemix EP 574

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

Formaldehyde, oligomeric reaction products with 1-chloro-2,3-epoxypropane and phenol/BPFDGE (9003-36-5)

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3)

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

TGMDA, multifunctional epoxide (28768-32-3)

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

N,N-Diglycidyl aniline (2095-06-9)

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether (2425-79-8)

| | |
|-------------------------------|------------------------|
| Persistence and degradability | Not rapidly degradable |
|-------------------------------|------------------------|

12.3. Bioaccumulative potential

bis-[4-(2,3-epoxipropoxy)phenyl]propane (1675-54-3)

| | |
|---|------------------------------|
| Partition coefficient n-octanol/water (Log Pow) | 2.918 – 3.566 (25°C, pH 7.1) |
|---|------------------------------|

| | |
|---|---------|
| Partition coefficient n-octanol/water (Log Kow) | ≥ 2.821 |
|---|---------|

TGMDA, multifunctional epoxide (28768-32-3)

| | |
|---|------|
| Partition coefficient n-octanol/water (Log Pow) | 2.12 |
|---|------|

[3-(2,3-epoxypropoxy)propyl]trimethoxysilane (2530-83-8)

| | |
|---|-------|
| Partition coefficient n-octanol/water (Log Pow) | -0.92 |
|---|-------|

1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether (2425-79-8)

| | |
|---|---------------|
| Partition coefficient n-octanol/water (Log Pow) | -0.269 (25°C) |
|---|---------------|

12.4. Mobility in soil

TGMDA, multifunctional epoxide (28768-32-3)

| | |
|------------------|-------------------------|
| Mobility in soil | 67.88 Source: EPI Suite |
|------------------|-------------------------|

| | |
|--|------|
| Organic Carbon Normalized Adsorption Coefficient (Log Koc) | 2.53 |
|--|------|

1,4-bis(2,3 epoxypropoxy)butane; butanedioldiglycidyl ether (2425-79-8)

| | |
|------------------|---|
| Mobility in soil | 0.48 Source: Quantitative Structure Activity Relation |
|------------------|---|

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12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods

HP Code

- : Dispose of contents/container in accordance with licensed collector's sorting instructions.
- : HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure.
- HP4 - "Irritant – skin irritation and eye damage:" waste which on application can cause skin irritation or damage to the eye.
- HP11 - "Mutagenic:" waste which may cause a mutation, that is a permanent change in the amount or structure of the genetic material in a cell.
- HP13 - "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs.
- HP14 - "Ecotoxic:" waste which presents or may present immediate or delayed risks for one or more sectors of the environment

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---------------------------------------|---------------------------------------|--|---------------------------------------|---------------------------------------|
| Special provision(s) applied : 375 | Special provision(s) applied : 969 | Special provision(s) applied : A197 | Special provision(s) applied : 375 | Special provision(s) applied : 375 |

These substances when carried in single or combination packagings containing a net quantity per single or inner packaging of 5 l or less for liquids or having a net mass per single or inner packaging of 5 kg or less for solids, are not subject to any other provisions of the transport regulations provided the packagings meet the general provisions.

14.1. UN number or ID number

| | | | | |
|---------|---------|---------|---------|---------|
| UN 3082 | UN 3082 | UN 3082 | UN 3082 | UN 3082 |
|---------|---------|---------|---------|---------|

14.2. UN proper shipping name

| | | | | |
|---|---|---|---|---|
| ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin) | Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin) | ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin) |
|---|---|---|---|---|

Transport document description

| | | | | |
|--|---|---|---|---|
| UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin), 9, III, (-) | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin), 9, III, MARINE POLLUTANT | UN 3082 Environmentally hazardous substance, liquid, n.o.s. (Epoxy resin), 9, III | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin), 9, III | UN 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy resin), 9, III |
|--|---|---|---|---|

14.3. Transport hazard class(es)

| | | | | |
|---|---|---|---|---|
| 9 | 9 | 9 | 9 | 9 |
|---|---|---|---|---|

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| ADR | IMDG | IATA | ADN | RID |
|--|---|------------------------------------|------------------------------------|------------------------------------|
| | | | | |
| 14.4. Packing group | | | | |
| III | III | III | III | III |
| 14.5. Environmental hazards | | | | |
| Dangerous for the environment: Yes | Dangerous for the environment: Yes Marine pollutant: Yes EmS-No. (Fire): F-A EmS-No. (Spillage): S-F | Dangerous for the environment: Yes | Dangerous for the environment: Yes | Dangerous for the environment: Yes |
| No supplementary information available | | | | |

14.6. Special precautions for user

Overland transport

Classification code (ADR) : M6
Special provisions (ADR) : 274, 335, 375, 601
Limited quantities (ADR) : 5I
Excepted quantities (ADR) : E1
Packing instructions (ADR) : P001, IBC03, LP01, R001
Special packing provisions (ADR) : PP1
Mixed packing provisions (ADR) : MP19
Portable tank and bulk container instructions (ADR) : T4
Portable tank and bulk container special provisions (ADR) : TP1, TP29
Tank code (ADR) : LGBV
Vehicle for tank carriage : AT
Transport category (ADR) : 3
Special provisions for carriage - Packages (ADR) : V12
Special provisions for carriage - Loading, unloading and handling (ADR) : CV13
Hazard identification number (Kemler No.) : 90
Orange plates :



Tunnel restriction code (ADR) : -
EAC code : •3Z

Transport by sea

Special provisions (IMDG) : 274, 335, 969
Limited quantities (IMDG) : 5 L
Excepted quantities (IMDG) : E1
Packing instructions (IMDG) : LP01, P001
Special packing provisions (IMDG) : PP1
IBC packing instructions (IMDG) : IBC03
Tank instructions (IMDG) : T4
Tank special provisions (IMDG) : TP1, TP29
Stowage category (IMDG) : A

Air transport

PCA Excepted quantities (IATA) : E1
PCA Limited quantities (IATA) : Y964
PCA limited quantity max net quantity (IATA) : 30kgG
PCA packing instructions (IATA) : 964

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| | |
|---------------------------------|-------------------------|
| PCA max net quantity (IATA) | : 450L |
| CAO packing instructions (IATA) | : 964 |
| CAO max net quantity (IATA) | : 450L |
| Special provisions (IATA) | : A97, A158, A197, A215 |
| ERG code (IATA) | : 9L |

Inland waterway transport

| | |
|-----------------------------------|----------------------|
| Classification code (ADN) | : M6 |
| Special provisions (ADN) | : 274, 335, 375, 601 |
| Limited quantities (ADN) | : 5 L |
| Excepted quantities (ADN) | : E1 |
| Carriage permitted (ADN) | : T |
| Equipment required (ADN) | : PP |
| Number of blue cones/lights (ADN) | : 0 |

Rail transport

| | |
|---|---------------------------|
| Classification code (RID) | : M6 |
| Special provisions (RID) | : 274, 335, 375, 601 |
| Limited quantities (RID) | : 5L |
| Excepted quantities (RID) | : E1 |
| Packing instructions (RID) | : P001, IBC03, LP01, R001 |
| Special packing provisions (RID) | : PP1 |
| Mixed packing provisions (RID) | : MP19 |
| Portable tank and bulk container instructions (RID) | : T4 |
| Portable tank and bulk container special provisions (RID) | : TP1, TP29 |
| Tank codes for RID tanks (RID) | : LGBV |
| Transport category (RID) | : 3 |
| Special provisions for carriage – Packages (RID) | : W12 |
| Special provisions for carriage - Loading, unloading and handling (RID) | : CW13, CW31 |
| Colis express (express parcels) (RID) | : CE8 |
| Hazard identification number (RID) | : 90 |

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

SECTION 15: Regulatory information

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

EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (2024/590)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 2024/590 on substances that deplete the ozone layer)

Council Regulation (EC) for the control of dual-use items

Contains no substance subject to the COUNCIL REGULATION (EC) for the control of dual-use items

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Explosives Precursors Regulation (EU 2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (EC 273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|--------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |

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Abbreviations and acronyms:

| | |
|---------|--|
| VOC | Volatile Organic Compounds |
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disruptor |

Full text of H- and EUH-statements:

| | |
|-------------------------------------|---|
| Acute Tox. 4 (Dermal) | Acute toxicity (dermal), Category 4 |
| Acute Tox. 4 (Inhalation:dust,mist) | Acute toxicity (inhalation:dust,mist) Category 4 |
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Chronic 2 | Hazardous to the aquatic environment – Chronic Hazard, Category 2 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| Eye Irrit. 2 | Serious eye damage/eye irritation, Category 2 |
| Muta. 2 | Germ cell mutagenicity, Category 2 |
| Repr. 1B | Reproductive toxicity, Category 1B |
| Skin Irrit. 2 | Skin corrosion/irritation, Category 2 |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| 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. |
| H341 | Suspected of causing genetic defects. |
| H360F | May damage fertility. |
| H411 | Toxic to aquatic life with long lasting effects. |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.

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

1.1. Product identifier

Product form : Mixture
Trade name : EL160 High Temperature Epoxy Hardener
Product code : EL160-B
UFI : OCE5-G9EW-100K-6NYG

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

1.2.1. Relevant identified uses

Main use category : Industrial use, Professional use
Use of the substance/mixture : Casting compound

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Easy Composites Ltd
Unit 39, Park Hall Business Village, Stoke on Trent,
Staffordshire,
ST3 5XA.
United Kingdom.

Tel: +44 (0)1782 454499 -
sales@easycomposites.com

1.4. Emergency telephone number

Emergency number : +44 (0)1782 454499 (working hours only)

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

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

Acute toxicity (oral), Category 4 H302
Skin corrosion/irritation, Category 1, Sub-Category 1B H314
Serious eye damage/eye irritation, Category 1 H318
Skin sensitisation, Category 1 H317
Specific target organ toxicity – Repeated exposure, Category 2 H373
Full text of H- and EUH-statements: see section 16

Adverse physicochemical, human health and environmental effects

To our knowledge, this product does not present any particular risk, provided it is handled in accordance with good occupational hygiene and safety practice.

2.2. Label elements

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

Hazard pictograms (CLP) :



GHS05

GHS07

GHS08

Signal word (CLP) :

Danger

Contains :

3-aminomethyl-3,5,5-trimethylcyclohexylamine; 4,4'-Diaminodicyclohexylmethane

Hazard statements (CLP) :

H302 - Harmful if swallowed.

H314 - Causes severe skin burns and eye damage.

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Precautionary statements (CLP)

- H317 - May cause an allergic skin reaction.
H373 - May cause damage to organs through prolonged or repeated exposure.
: P261 - Avoid breathing dust/fume/gas/mist/vapours/spray.
P264 - Wash hands thoroughly after handling.
P280 - Wear protective gloves, protective clothing, eye protection.
P303+P361+P353+P310 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. Immediately call a POISON CENTER or doctor.
P305+P351+P338+P310 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor.
P321 - Specific treatment (see supplemental first aid instruction on this label).

2.3. Other hazards

Contains no PBT/vPvB substances $\geq 0.1\%$ assessed in accordance with REACH Annex XIII

The mixture does not contain substance(s) included in the list established in accordance with Article 59(1) of REACH for having endocrine disrupting properties, or is not identified as having endocrine disrupting properties in accordance with the criteria set out in Commission Delegated Regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at a concentration equal to or greater than 0,1 %

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

| Name | Product identifier | % | Classification according to Regulation (EC) No. 1272/2008 [CLP] |
|--|---|-----------|--|
| 4,4'-Diaminodicyclohexylmethane | CAS-No.: 1761-71-3 EC-No.: 217-168-8 REACH-no: 01-2119541673-38 | ≥ 50 | Acute Tox. 4 (Oral), H302 Skin Corr. 1, H314 Eye Dam. 1, H318 Skin Sens. 1, H317 STOT RE 2, H373 |
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | CAS-No.: 2855-13-2 EC-No.: 220-666-8 EC Index-No.: 612-067-00-9 REACH-no: 01-2119514687-32 | 1 – 25 | Acute Tox. 4 (Oral), H302 Skin Corr. 1B, H314 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 3, H412 |

Specific concentration limits:

| Name | Product identifier | Specific concentration limits (%) |
|--|---|---|
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine | CAS-No.: 2855-13-2 EC-No.: 220-666-8 EC Index-No.: 612-067-00-9 REACH-no: 01-2119514687-32 | (0.001 \leq C \leq 100) Skin Sens. 1A, H317 |

Full text of H- and EUH-statements: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
First-aid measures after skin contact : Wash skin with plenty of water.
First-aid measures after eye contact : Rinse eyes with water as a precaution.

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First-aid measures after ingestion : Call a poison center or a doctor if you feel unwell.

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

No additional information available

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Water spray. Dry powder. Foam. Carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products in case of fire : Toxic fumes may be released.

5.3. Advice for firefighters

Protection during firefighting : Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Emergency procedures : Ventilate spillage area.

6.1.2. For emergency responders

Protective equipment : Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection".

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

Methods for cleaning up : Take up liquid spill into absorbent material.

Other information : Dispose of materials or solid residues at an authorized site.

6.4. Reference to other sections

For further information refer to section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Ensure good ventilation of the work station. Wear personal protective equipment.

Hygiene measures : Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Store in a well-ventilated place. Keep cool.

7.3. Specific end use(s)

No additional information available

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SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1 National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station.

8.2.2. Personal protection equipment

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | |
|-----------------|-----------------|
| Physical state | : Liquid |
| Colour | : clear. |
| Odour | : Amine-like. |
| Odour threshold | : Not available |

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| | |
|---|--|
| Melting point | : Not applicable |
| Freezing point | : Not available |
| Boiling point | : Not available |
| Flammability | : Not applicable |
| Lower explosion limit | : Not available |
| Upper explosion limit | : Not available |
| Flash point | : Not available |
| Auto-ignition temperature | : Not available |
| Decomposition temperature | : Not available |
| pH | : Not available |
| Viscosity, kinematic | : Not available |
| Viscosity, dynamic | : 55 – 75 mPa·s (25°C) |
| Solubility | : Not available |
| Partition coefficient n-octanol/water (Log Kow) | : Not available |
| Vapour pressure | : Not available |
| Vapour pressure at 50°C | : Not available |
| Density | : 0.93 – 0.98 g/cm ³ (25°C) |
| Relative density | : Not available |
| Relative vapour density at 20°C | : Not available |
| Particle characteristics | : Not applicable |

9.2. Other information

9.2.1. Information with regard to physical hazard classes

No additional information available

9.2.2. Other safety characteristics

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

The product is non-reactive under normal conditions of use, storage and transport.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

None under recommended storage and handling conditions (see section 7).

10.5. Incompatible materials

No additional information available

10.6. Hazardous decomposition products

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

SECTION 11: Toxicological information

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

| | |
|-----------------------------|-------------------------|
| Acute toxicity (oral) | : Harmful if swallowed. |
| Acute toxicity (dermal) | : Not classified |
| Acute toxicity (inhalation) | : Not classified |

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| Hardener H574 | |
|--|--|
| ATE CLP (oral) | 438.053 mg/kg bodyweight |
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2) | |
| LD50 oral rat | 1030 mg/kg |
| LD50 dermal rat | > 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Remarks on results: other: |
| LD50 dermal rabbit | > 1840 mg/kg |
| 4,4'-Diaminodicyclohexylmethane (1761-71-3) | |
| LD50 oral rat | 380 mg/kg |
| LD50 dermal rabbit | 2110 mg/kg bodyweight Animal: rabbit, Guideline: EPA OPP 81-2 (Acute Dermal Toxicity) |
| Skin corrosion/irritation | : Causes severe skin burns. |
| 4,4'-Diaminodicyclohexylmethane (1761-71-3) | |
| pH | 11.6 Temp.: 25 °C |
| Serious eye damage/irritation | : Causes serious eye damage. |
| 4,4'-Diaminodicyclohexylmethane (1761-71-3) | |
| pH | 11.6 Temp.: 25 °C |
| Respiratory or skin sensitisation | : May cause an allergic skin reaction. |
| Germ cell mutagenicity | : Not classified |
| Carcinogenicity | : Not classified |
| Reproductive toxicity | : Not classified |
| STOT-single exposure | : Not classified |
| STOT-repeated exposure | : May cause damage to organs through prolonged or repeated exposure. |
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2) | |
| LOAEL (oral, rat, 90 days) | 160 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity Study in Rodents) |
| 4,4'-Diaminodicyclohexylmethane (1761-71-3) | |
| STOT-repeated exposure | May cause damage to organs through prolonged or repeated exposure. |
| Aspiration hazard | : Not classified |
| 3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2) | |
| Viscosity, kinematic | 19 mm ² /s Temp.: 'other:' Parameter: 'kinematic viscosity (in mm ² /s)' |

11.2. Information on other hazards

No additional information available

SECTION 12: Ecological information

12.1. Toxicity

| | |
|---|---|
| Ecology - general | : The product is not considered harmful to aquatic organisms nor to cause long-term adverse effects in the environment. |
| Hazardous to the aquatic environment, short-term (acute) | : Not classified |
| Hazardous to the aquatic environment, long-term (chronic) | : Not classified |
| Not rapidly degradable | |

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| 3-aminomethyl-3,5,5-trimethylcyclohexylamine (2855-13-2) | |
|---|--|
| LC50 - Fish [1] | 110 mg/l Test organisms (species): Leuciscus idus |
| EC50 - Crustacea [1] | 17.4 mg/l |
| EC50 72h - Algae [1] | 37 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| EC50 72h - Algae [2] | > 50 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus) |
| LOEC (chronic) | 10 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |
| NOEC (chronic) | 3 mg/l Test organisms (species): Daphnia magna Duration: '21 d' |

| 4,4'-Diaminodicyclohexylmethane (1761-71-3) | |
|--|---|
| LC50 - Fish [1] | > 100 mg/l Test organisms (species): Leuciscus idus |
| EC50 - Crustacea [1] | 9.24 mg/l Daphnia magna (Water flea) |
| ErC50 algae | 141.2 mg/l Desmodesmus subspicatus |
| NOEC chronic crustacea | 4 mg/l Daphnia magna (Water flea) |

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

| 4,4'-Diaminodicyclohexylmethane (1761-71-3) | |
|--|------|
| Partition coefficient n-octanol/water (Log Pow) | 2.03 |

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Endocrine disrupting properties

No additional information available

12.7. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

| | |
|-------------------------|---|
| Waste treatment methods | : Dispose of contents/container in accordance with licensed collector's sorting instructions. |
| HP Code | : HP5 - "Specific Target Organ Toxicity (STOT)/Aspiration Toxicity:" waste which can cause specific target organ toxicity either from a single or repeated exposure, or which cause acute toxic effects following aspiration. HP6 - "Acute Toxicity:" waste which can cause acute toxic effects following oral or dermal administration, or inhalation exposure. HP8 - "Corrosive:" waste which on application can cause skin corrosion. HP13 - "Sensitising:" waste which contains one or more substances known to cause sensitising effects to the skin or the respiratory organs. |






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SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

| ADR | IMDG | IATA | ADN | RID |
|---|--|--|--|--|
| 14.1. UN number or ID number | | | | |
| UN 2735 | UN 2735 | UN 2735 | UN 2735 | UN 2735 |
| 14.2. UN proper shipping name | | | | |
| POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine) | POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine) | Amines, liquid, corrosive, n.o.s. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine) | POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine) | POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine) |
| Transport document description | | | | |
| UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II, (E) | UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II | UN 2735 Amines, liquid, corrosive, n.o.s. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II | UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II | UN 2735 POLYAMINES, LIQUID, CORROSIVE, N.O.S. (CONTAINS : 4,4'-Diaminodicyclohexylmethane ; 3-aminomethyl-3,5,5-trimethylcyclohexylamine), 8, II |
| 14.3. Transport hazard class(es) | | | | |
| 8 | 8 | 8 | 8 | 8 |
|  |  |  |  |  |
| 14.4. Packing group | | | | |
| II | II | II | II | II |
| 14.5. Environmental hazards | | | | |
| Dangerous for the environment: No | Dangerous for the environment: No Marine pollutant: No | Dangerous for the environment: No | Dangerous for the environment: No | Dangerous for the environment: No |
| No supplementary information available | | | | |

14.6. Special precautions for user

Overland transport

| | |
|---|---------------|
| Classification code (ADR) | : C7 |
| Special provisions (ADR) | : 274 |
| Limited quantities (ADR) | : 1I |
| Excepted quantities (ADR) | : E2 |
| Packing instructions (ADR) | : P001, IBC02 |
| Mixed packing provisions (ADR) | : MP15 |
| Portable tank and bulk container instructions (ADR) | : T11 |
| Portable tank and bulk container special provisions (ADR) | : TP1, TP27 |
| Tank code (ADR) | : L4BN |
| Vehicle for tank carriage | : AT |
| Transport category (ADR) | : 2 |
| Hazard identification number (Kemler No.) | : 80 |

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Orange plates : 

Tunnel restriction code (ADR) : E
EAC code : 2X

Transport by sea

Special provisions (IMDG) : 274
Limited quantities (IMDG) : 1 L
Excepted quantities (IMDG) : E2
Packing instructions (IMDG) : P001
IBC packing instructions (IMDG) : IBC02
Tank instructions (IMDG) : T11
Tank special provisions (IMDG) : TP1, TP27
EmS-No. (Fire) : F-A
EmS-No. (Spillage) : S-B
Stowage category (IMDG) : A
Segregation (IMDG) : SGG18, SG35
Properties and observations (IMDG) : Colourless to yellowish liquids or solutions with a pungent odour. Miscible with or soluble in water. When involved in a fire, evolve toxic gases. Corrosive to most metals, especially to copper and its alloys. Reacts violently with acids. Cause burns to skin, eyes and mucous membranes.

Air transport

PCA Excepted quantities (IATA) : E2
PCA Limited quantities (IATA) : Y840
PCA limited quantity max net quantity (IATA) : 0.5L
PCA packing instructions (IATA) : 851
PCA max net quantity (IATA) : 1L
CAO packing instructions (IATA) : 855
CAO max net quantity (IATA) : 30L
Special provisions (IATA) : A3, A803
ERG code (IATA) : 8L

Inland waterway transport

Classification code (ADN) : C7
Special provisions (ADN) : 274
Limited quantities (ADN) : 1 L
Excepted quantities (ADN) : E2
Carriage permitted (ADN) : T
Equipment required (ADN) : PP, EP
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : C7
Special provisions (RID) : 274
Limited quantities (RID) : 1L
Excepted quantities (RID) : E2
Packing instructions (RID) : P001, IBC02
Mixed packing provisions (RID) : MP15
Portable tank and bulk container instructions (RID) : T11
Portable tank and bulk container special provisions (RID) : TP1, TP27
Tank codes for RID tanks (RID) : L4BN
Transport category (RID) : 2
Colis express (express parcels) (RID) : CE6
Hazard identification number (RID) : 80

14.7. Maritime transport in bulk according to IMO instruments

Not applicable

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SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

REACH Annex XVII (Restriction List)

Contains no substance(s) listed on REACH Annex XVII (Restriction Conditions)

REACH Annex XIV (Authorisation List)

Contains no substance(s) listed on REACH Annex XIV (Authorisation List)

REACH Candidate List (SVHC)

Contains no substance(s) listed on the REACH Candidate List

PIC Regulation (Prior Informed Consent)

Contains no substance(s) listed on the PIC list (Regulation EU 649/2012 concerning the export and import of hazardous chemicals)

POP Regulation (Persistent Organic Pollutants)

Contains no substance(s) listed on the POP list (Regulation EU 2019/1021 on persistent organic pollutants)

Ozone Regulation (1005/2009)

Contains no substance(s) listed on the Ozone Depletion list (Regulation EU 1005/2009 on substances that deplete the ozone layer)

Explosives Precursors Regulation (2019/1148)

Contains no substance(s) listed on the Explosives Precursors list (Regulation EU 2019/1148 on the marketing and use of explosives precursors)

Drug Precursors Regulation (273/2004)

Contains no substance(s) listed on the Drug Precursors list (Regulation EC 273/2004 on the manufacture and the placing on market of certain substances used in the illicit manufacture of narcotic drugs and psychotropic substances)

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms:

| | |
|--------|---|
| ADN | European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways |
| ADR | European Agreement concerning the International Carriage of Dangerous Goods by Road |
| ATE | Acute Toxicity Estimate |
| BCF | Bioconcentration factor |
| BLV | Biological limit value |
| BOD | Biochemical oxygen demand (BOD) |
| COD | Chemical oxygen demand (COD) |
| DMEL | Derived Minimal Effect level |
| DNEL | Derived-No Effect Level |
| EC-No. | European Community number |
| EC50 | Median effective concentration |
| EN | European Standard |
| IARC | International Agency for Research on Cancer |
| IATA | International Air Transport Association |

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| Abbreviations and acronyms: | |
|-----------------------------|--|
| IMDG | International Maritime Dangerous Goods |
| LC50 | Median lethal concentration |
| LD50 | Median lethal dose |
| LOAEL | Lowest Observed Adverse Effect Level |
| NOAEC | No-Observed Adverse Effect Concentration |
| NOAEL | No-Observed Adverse Effect Level |
| NOEC | No-Observed Effect Concentration |
| OECD | Organisation for Economic Co-operation and Development |
| OEL | Occupational Exposure Limit |
| PBT | Persistent Bioaccumulative Toxic |
| PNEC | Predicted No-Effect Concentration |
| RID | Regulations concerning the International Carriage of Dangerous Goods by Rail |
| SDS | Safety Data Sheet |
| STP | Sewage treatment plant |
| ThOD | Theoretical oxygen demand (ThOD) |
| TLM | Median Tolerance Limit |
| VOC | Volatile Organic Compounds |
| CAS-No. | Chemical Abstract Service number |
| N.O.S. | Not Otherwise Specified |
| vPvB | Very Persistent and Very Bioaccumulative |
| ED | Endocrine disrupting properties |

| Full text of H- and EUH-statements: | |
|-------------------------------------|--|
| Acute Tox. 4 (Oral) | Acute toxicity (oral), Category 4 |
| Aquatic Chronic 3 | Hazardous to the aquatic environment – Chronic Hazard, Category 3 |
| Eye Dam. 1 | Serious eye damage/eye irritation, Category 1 |
| H302 | Harmful if swallowed. |
| H314 | Causes severe skin burns and eye damage. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H373 | May cause damage to organs through prolonged or repeated exposure. |
| H412 | Harmful to aquatic life with long lasting effects. |
| Skin Corr. 1 | Skin corrosion/irritation, Category 1 |
| Skin Corr. 1B | Skin corrosion/irritation, Category 1, Sub-Category 1B |
| Skin Sens. 1 | Skin sensitisation, Category 1 |
| Skin Sens. 1A | Skin sensitisation, category 1A |
| STOT RE 2 | Specific target organ toxicity – Repeated exposure, Category 2 |

Safety Data Sheet (SDS), EU

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.