

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

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

1.1 Product identifier

Trade name : ETHYLENEDIAMINE (EDA)

Substance name : Ethylenediamine

CAS-No. : 107-15-3

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

Use of the Substance/Mixture : Various industrial applications

1.3 Details of the supplier of the safety data sheet

Company : Nouryon
Functional Chemicals AB
PO BOX 47067
SE 40258 Goteborg
Sweden

Telephone : +4630385000

Telefax : +46303770551

E-mail address of person responsible for the SDS : QTS@nouryon.com

1.4 Emergency telephone number

Emergency telephone number : 24 hours emergency response number: +31 57 06 79211, Kemiakuten-SE: 020 99 60 00<(>,<)>

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

Flammable liquids, Category 3

H226: Flammable liquid and vapour.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758


ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

| | |
|--|--|
| Acute toxicity, Category 4 | H302: Harmful if swallowed. |
| Acute toxicity, Category 4 | H332: Harmful if inhaled. |
| Acute toxicity, Category 3 | H311: Toxic in contact with skin. |
| Skin corrosion, Sub-category 1B | H314: Causes severe skin burns and eye damage. |
| Serious eye damage, Category 1 | H318: Causes serious eye damage. |
| Respiratory sensitisation, Category 1 | H334: May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| Skin sensitisation, Category 1 | H317: May cause an allergic skin reaction. |
| Long-term (chronic) aquatic hazard, Category 3 | H412: Harmful to aquatic life with long lasting effects. |

2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008) as amended by GB-CLP Regulation, UK SI 2019/720, and UK SI 2020/1567)

| | | |
|--------------------------|---|---|
| Hazard pictograms | : |  |
| Signal word | : | Danger |
| Hazard statements | : | <p>H226 Flammable liquid and vapour. H302 + H332 Harmful if swallowed or if inhaled. H311 Toxic in contact with skin. H314 Causes severe skin burns and eye damage. H317 May cause an allergic skin reaction. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled. H412 Harmful to aquatic life with long lasting effects.</p> |
| Precautionary statements | : | <p>Prevention: P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 Avoid breathing mist or vapours. P280 Wear protective gloves/ protective clothing/ eye protection/ face protection/ hearing protection.</p> |

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

Response:

P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water.
 P304 + P340 + P310 IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER/ 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/ doctor.
 P342 + P311 If experiencing respiratory symptoms: Call a POISON CENTER/ doctor.
 P370 + P378 In case of fire: Use vermiculite, dry chemical powder or dry sand to extinguish.

2.3 Other hazards

This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

SECTION 3: Composition/information on ingredients

3.1 Substances

Substance name : ETHYLENEDIAMINE (EDA)
 CAS-No. : 107-15-3

Components

| Chemical name | CAS-No. EC-No. | Concentration (% w/w) |
|-----------------|-----------------------|-----------------------|
| Ethylenediamine | 107-15-3 203-468-6 | >= 90 - <= 100 |

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice : Immediate medical attention is required.
 Move out of dangerous area.
 Show this safety data sheet to the doctor in attendance.
 Symptoms of poisoning may appear several hours later.

If inhaled : If breathed in, move person into fresh air.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

- Consult a physician after significant exposure.
- In case of skin contact : Take off contaminated clothing and shoes immediately.
Rinse immediately with plenty of water.
Immediate medical treatment is necessary as untreated wounds from corrosion of the skin heal slowly and with difficulty.
Take victim immediately to hospital.
- In case of eye contact : Rinse with plenty of water.
Get medical attention immediately. Continue to rinse during transport.
Remove contact lenses.
Protect unharmed eye.
Keep eye wide open while rinsing.
Small amounts splashed into eyes can cause irreversible tissue damage and blindness.
- If swallowed : Clean mouth with water and drink afterwards plenty of water.
Never give anything by mouth to an unconscious person.
Take victim immediately to hospital.
Do not induce vomiting! May cause chemical burns in mouth and throat.

4.2 Most important symptoms and effects, both acute and delayed

- Symptoms : The symptoms and effects are as expected from the hazards as shown in section 2. No specific product related symptoms are known.
- Risks : Harmful if swallowed or if inhaled.
Toxic in contact with skin.
May cause an allergic skin reaction.
Causes serious eye damage.
May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Causes severe burns.

4.3 Indication of any immediate medical attention and special treatment needed

- Treatment : Treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

- Suitable extinguishing media : Carbon dioxide (CO₂)

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2 Special hazards arising from the substance or mixture

- | | | |
|--------------------------------------|---|--|
| Specific hazards during firefighting | : | Water spray may be ineffective unless used by experienced firefighters. Do not allow run-off from fire fighting to enter drains or water courses. |
| Hazardous combustion products | : | Carbon oxides Nitrogen oxides (NOx) |

5.3 Advice for firefighters

- | | | |
|---|---|---|
| Special protective equipment for firefighters | : | In the event of fire, wear self-contained breathing apparatus. |
| Further information | : | Use water spray to cool unopened containers. Collect contaminated fire extinguishing water separately. This must not be discharged into drains. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations. For safety reasons in case of fire, cans should be stored separately in closed containments. |

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

- | | | |
|----------------------|---|---|
| Personal precautions | : | Use personal protective equipment. Wear respiratory protection. Ensure adequate ventilation. Remove all sources of ignition. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Evacuate personnel to safe areas. Only qualified personnel equipped with suitable protective equipment may intervene. Prevent unauthorised persons entering the zone. |
|----------------------|---|---|

6.2 Environmental precautions

- | | | |
|---------------------------|---|--|
| Environmental precautions | : | Prevent product from entering drains. Discharge into the environment must be avoided. |
|---------------------------|---|--|

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

6.3 Methods and material for containment and cleaning up

Methods for cleaning up : Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

6.4 Reference to other sections

For disposal considerations see section 13.
For personal protection see section 8.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Advice on safe handling : Persons with a history of skin sensitisation problems or asthma, allergies, chronic or recurrent respiratory disease should not be employed in any process in which this mixture is being used.

For personal protection see section 8.
Avoid formation of aerosol.
Do not breathe vapours or spray mist.
Avoid contact with skin, eyes and clothing.
Smoking, eating and drinking should be prohibited in the application area.
Provide sufficient air exchange and/or exhaust in work rooms.
Container may be opened only under exhaust ventilation hood.
Open drum carefully as content may be under pressure.
Dispose of rinse water in accordance with local and national regulations.

Advice on protection against fire and explosion : Avoid formation of aerosol. Keep away from sources of ignition - No smoking. No sparking tools should be used. Take measures to prevent the build up of electrostatic charge.

Hygiene measures : Avoid contact with skin, eyes and clothing. When using do not eat or drink. When using do not smoke. Wash hands before breaks and immediately after handling the product. Wash contaminated clothing before re-use.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for storage areas and containers : Prevent unauthorized access. No smoking. Keep in a well-ventilated place. Reacts with copper, aluminium, zinc and their alloys. Electrical installations / working materials must comply with the technological safety standards.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

Further information on storage stability : No decomposition if stored and applied as directed.

7.3 Specific end use(s)

Specific use(s) : Consult the technical guidelines for the use of this substance/mixture.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Contains no substances with occupational exposure limit values.

8.2 Exposure controls

Engineering measures

Effective exhaust ventilation system

Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Eye/face protection : Safety glasses with side-shields conforming to EN166

Hand protection

Material : butyl-rubber
 Break through time : > 30 min
 Glove thickness : >= 0.2 mm
 Directive : Protective gloves complying with EN 374.
 Wearing time : < 30 min

Material : butyl-rubber
 Break through time : > 240 min
 Glove thickness : >= 0.6 mm
 Directive : Protective gloves complying with EN 374.
 Wearing time : < 240 min

Material : butyl-rubber
 Break through time : > 480 min
 Glove thickness : >= 0.8 mm
 Directive : Protective gloves complying with EN 374.
 Wearing time : < 480 min

Remarks : The data about break through time/strength of material are standard values! The exact break through time/strength of material has to be obtained from the producer of the

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

| | | |
|--------------------------|---|---|
| | | protective glove. |
| Skin and body protection | : | Protective suit |
| Respiratory protection | : | In the case of vapour or aerosol formation use a respirator with an approved filter. Wear full face mask supplied with: Gas cartridge K (ammonia, green). |

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

| | | |
|--|---|--|
| Appearance | : | Clear liquid |
| Colour | : | colourless |
| Odour | : | ammoniacal |
| Odour Threshold | : | No data available |
| pH | : | 12.8 Concentration: 25 % |
| Melting point/range | : | 11 °C (1,013 hPa) |
| Boiling point/boiling range | : | 117 °C (1,013 hPa) |
| Flash point | : | 38 °C(1,013 hPa) Method: closed cup |
| Evaporation rate | : | No data available |
| Flammability (solid, gas) | : | Not applicable |
| Upper explosion limit / Upper flammability limit | : | 17 %(V) |
| Lower explosion limit / Lower flammability limit | : | 2 %(V) |
| Vapour pressure | : | 17.3 hPa (26.6 °C) |
| Relative vapour density | : | 2.1 |

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

| | | |
|--|---|--|
| Relative density | : | 0.897 (20 °C) |
| Density | : | 0.895 g/cm ³ (20 °C) |
| Solubility(ies) | | |
| Water solubility | : | completely miscible |
| Solubility in other solvents | : | Description: Very soluble in ethanol and benzene. |
| Partition coefficient: n-octanol/water | : | log Pow: -1.6 (20 °C) |
| Auto-ignition temperature | : | 385 - 405 °C (1,013 hPa) |
| Decomposition temperature | : | No data available |
| Viscosity | | |
| Viscosity, dynamic | : | 1.265 mPa.s (25 °C) |
| Viscosity, kinematic | : | No data available |
| Explosive properties | : | Not explosive |
| Oxidizing properties | : | The substance or mixture is not classified as oxidizing. |

9.2 Other information

| | | |
|------------------------|---|------------------------------|
| Flammability (liquids) | : | Flammable liquid and vapour. |
|------------------------|---|------------------------------|

SECTION 10: Stability and reactivity

10.1 Reactivity

Stable under normal conditions.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

| | | |
|---------------------|---|--------------------------------------|
| Hazardous reactions | : | Heating can release hazardous gases. |
|---------------------|---|--------------------------------------|

10.4 Conditions to avoid

| | | |
|---------------------|---|--------------------------|
| Conditions to avoid | : | Heat, flames and sparks. |
|---------------------|---|--------------------------|

10.5 Incompatible materials

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

Materials to avoid : Reacts with copper, aluminium, zinc and their alloys.
Strong acids and oxidizing agents
Halogenated compounds

10.6 Hazardous decomposition products

Nitrogen oxides (NOx)
Thermal decomposition : No data available

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Acute toxicity

Harmful if swallowed or if inhaled.
Toxic in contact with skin.

Components:

Ethylenediamine:

Acute oral toxicity : LD50 (Rat): > 300 - 2,000 mg/kg
Acute inhalation toxicity : LC50 (Rat): > 10 - 20 mg/l
Exposure time: 4 h
Test atmosphere: vapour
Acute dermal toxicity : LD50 (Rabbit): > 200 - 1,000 mg/kg

Skin corrosion/irritation

Causes severe burns.

Components:

Ethylenediamine:

Result : Causes burns.

Serious eye damage/eye irritation

Causes serious eye damage.

Respiratory or skin sensitisation

Skin sensitisation

May cause an allergic skin reaction.

Respiratory sensitisation

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

Components:

Ethylenediamine:

Result : The product is a skin sensitiser, sub-category 1B.

Result : The product is a respiratory sensitiser, sub-category 1B.

Germ cell mutagenicity

Not classified based on available information.

Components:

Ethylenediamine:

Genotoxicity in vitro : Result: Not mutagenic.

Remarks: Positive results were obtained in some in vitro tests.

Genotoxicity in vivo : Result: No evidence of genotoxic effects in vivo.

Carcinogenicity

Not classified based on available information.

Reproductive toxicity

Not classified based on available information.

STOT - single exposure

Not classified based on available information.

STOT - repeated exposure

Not classified based on available information.

Aspiration toxicity

Not classified based on available information.

Further information

Product:

Remarks : Solvents may degrease the skin.

SECTION 12: Ecological information

12.1 Toxicity

Components:

Ethylenediamine:

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

| | | |
|--|---|---|
| Toxicity to fish | : | LC50 (Poecilia reticulata (guppy)): > 100 mg/l Exposure time: 96 h |
| Toxicity to daphnia and other aquatic invertebrates | : | EC50 (Daphnia magna (Water flea)): > 10 - 100 mg/l Exposure time: 48 h |
| Toxicity to algae/aquatic plants | : | EC50 (Pseudokirchneriella subcapitata (green algae)): > 100 mg/l Exposure time: 72 h |
| Toxicity to daphnia and other aquatic invertebrates (Chronic toxicity) | : | NOEC: > 0.1 - 1 mg/l Exposure time: 21 d Species: Daphnia magna (Water flea) |

Ecotoxicology Assessment

| | | |
|--------------------------|---|--|
| Acute aquatic toxicity | : | Harmful to aquatic life. |
| Chronic aquatic toxicity | : | Harmful to aquatic life with long lasting effects. |

12.2 Persistence and degradability

Product:

| | | |
|---------------------------------|---|--------------------------------|
| Biodegradability | : | Result: Readily biodegradable. |
| Biochemical Oxygen Demand (BOD) | : | Remarks: No data available |

Components:

Ethylenediamine:

| | | |
|---------------------------------|---|---|
| Biodegradability | : | Result: Readily biodegradable. Remarks: >60% BOD, 28 days, Closed Bottle Test (OECD 301D). |
| Biochemical Oxygen Demand (BOD) | : | Remarks: No data available |

12.3 Bioaccumulative potential

Product:

| | | |
|-----------------|---|--|
| Bioaccumulation | : | Remarks: Not expected considering the low log Pow value. |
|-----------------|---|--|

Components:

Ethylenediamine:

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|----------------|------------------------------|---------|---|
| Version 6.2 | Revision Date: 21.03.2023 | GB / EN | Date of last issue: 02.02.2023 Date of first issue: 20.12.2012 |
|----------------|------------------------------|---------|---|

Bioaccumulation : Remarks: Not expected considering the low log Pow value.

Partition coefficient: n-octanol/water : log Pow: -1.6 (20 °C)

12.4 Mobility in soil

Product:

Mobility : Remarks: Adsorption to solid soil phase is possible.

Components:

Ethylenediamine:

Mobility : Remarks: Adsorption to solid soil phase is possible., Groundwater contamination is unlikely., Transport to air is not expected.

12.5 Results of PBT and vPvB assessment

Product:

Assessment : This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Components:

Ethylenediamine:

Assessment : This substance is not considered to be a PBT (Persistent, Bioaccumulation, Toxic). This substance is not considered to be vPvB (very Persistent nor very Bioaccumulating)

12.6 Other adverse effects

Product:

Endocrine disrupting potential : The substance/mixture does not contain components considered to have endocrine disrupting properties according to REACH Article 57(f) or Commission Delegated regulation (EU) 2017/2100 or Commission Regulation (EU) 2018/605 at levels of 0.1% or higher.

Additional ecological information : An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

SECTION 13: Disposal considerations

13.1 Waste treatment methods

- | | | |
|------------------------|---|--|
| Product | : | The product should not be allowed to enter drains, water courses or the soil. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local regulation. |
| Contaminated packaging | : | Empty remaining contents. Dispose of as unused product. Do not burn, or use a cutting torch on, the empty drum. |
-

SECTION 14: Transport information

14.1 UN number

- | | | |
|------|---|---------|
| ADR | : | UN 1604 |
| RID | : | UN 1604 |
| IMDG | : | UN 1604 |
| IATA | : | UN 1604 |

14.2 UN proper shipping name

- | | | |
|------|---|-----------------|
| ADR | : | ETHYLENEDIAMINE |
| RID | : | ETHYLENEDIAMINE |
| IMDG | : | ETHYLENEDIAMINE |
| IATA | : | Ethylenediamine |

14.3 Transport hazard class(es)

- | | | |
|------|---|---|
| ADR | : | 8 |
| RID | : | 8 |
| IMDG | : | 8 |
| IATA | : | 8 |

14.4 Packing group

- | | | |
|---------------------|---|-----|
| ADR | : | |
| Packing group | : | II |
| Classification Code | : | CF1 |

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

Hazard Identification Number : 83
 Labels : 8 (3)
 Tunnel restriction code : (D/E)

RID

Packing group : II
 Classification Code : CF1
 Hazard Identification Number : 83
 Labels : 8 (3)

IMDG

Packing group : II
 Labels : 8 (3)
 EmS Code : F-E, S-C

IATA (Cargo)

Packing instruction (cargo aircraft) : 855
 Packing instruction (LQ) : Y840
 Packing group : II
 Labels : Corrosives, Flammable Liquids

IATA (Passenger)

Packing instruction (passenger aircraft) : 851
 Packing instruction (LQ) : Y840
 Packing group : II
 Labels : Corrosives, Flammable Liquids

14.5 Environmental hazards

ADR

Environmentally hazardous : no

RID

Environmentally hazardous : no

IMDG

Marine pollutant : no

14.6 Special precautions for user

The transport classification(s) provided herein are for informational purposes only. Transportation classifications may vary by mode of transportation, package sizes, and variations in regional or country regulations.

14.7 Transport in bulk according to Annex II of Marpol and the IBC Code

Not applicable for product as supplied.

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by
UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

SECTION 15: Regulatory information

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

Relevant EU provisions transposed through retained EU law

| | | |
|---|-----|---|
| UK REACH List of restrictions (Annex 17) | : | Conditions of restriction for the following entries should be considered: Number on list 40, 3 |
| UK REACH Candidate list of substances of very high concern (SVHC) for Authorisation | : | Ethylenediamine |
| The Persistent Organic Pollutants Regulations (retained Regulation (EU) 2019/1021 as amended for Great Britain) | : | Not applicable |
| Regulation (EC) No 1005/2009 on substances that deplete the ozone layer | : | Not applicable |
| UK REACH List of substances subject to authorisation (Annex XIV) | : | Not applicable |
| GB Export and import of hazardous chemicals - Prior Informed Consent (PIC) Regulation | : | Not applicable |
| Control of Major Accident Hazards Regulations 2015 (COMAH) | P5c | FLAMMABLE LIQUIDS |

The components of this product are reported in the following inventories:

| | | |
|------|---|--|
| TCSI | : | On the inventory, or in compliance with the inventory |
| TSCA | : | All substances listed as active on the TSCA inventory |
| AIIC | : | On the inventory, or in compliance with the inventory |
| DSL | : | All components of this product are on the Canadian DSL |
| ENCS | : | On the inventory, or in compliance with the inventory |
| ISHL | : | On the inventory, or in compliance with the inventory |
| KECI | : | On the inventory, or in compliance with the inventory |

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

PICCS : On the inventory, or in compliance with the inventory

IECSC : On the inventory, or in compliance with the inventory

NZIoC : On the inventory, or in compliance with the inventory

TECI : On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

Ethylenediamine : A Chemical Safety Assessment has been carried out for this substance.

SECTION 16: Other information

Full text of other abbreviations

ADN - European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways; ADR - Agreement concerning the International Carriage of Dangerous Goods by Road; AIIC - Australian Inventory of Industrial Chemicals; ASTM - American Society for the Testing of Materials; bw - Body weight; CLP - Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008; CMR - Carcinogen, Mutagen or Reproductive Toxicant; DIN - Standard of the German Institute for Standardisation; DSL - Domestic Substances List (Canada); ECHA - European Chemicals Agency; EC-Number - European Community number; ECx - Concentration associated with x% response; ELx - Loading rate associated with x% response; EmS - Emergency Schedule; ENCS - Existing and New Chemical Substances (Japan); ErCx - Concentration associated with x% growth rate response; GHS - Globally Harmonized System; GLP - Good Laboratory Practice; IARC - International Agency for Research on Cancer; IATA - International Air Transport Association; IBC - International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk; IC50 - Half maximal inhibitory concentration; ICAO - International Civil Aviation Organization; IECSC - Inventory of Existing Chemical Substances in China; IMDG - International Maritime Dangerous Goods; IMO - International Maritime Organization; ISHL - Industrial Safety and Health Law (Japan); ISO - International Organisation for Standardization; KECI - Korea Existing Chemicals Inventory; LC50 - Lethal Concentration to 50 % of a test population; LD50 - Lethal Dose to 50% of a test population (Median Lethal Dose); MARPOL - International Convention for the Prevention of Pollution from Ships; n.o.s. - Not Otherwise Specified; NO(A)EC - No Observed (Adverse) Effect Concentration; NO(A)EL - No Observed (Adverse) Effect Level; NOELR - No Observable Effect Loading Rate; NZIoC - New Zealand Inventory of Chemicals; OECD - Organization for Economic Co-operation and Development; OPPTS - Office of Chemical Safety and Pollution Prevention; PBT - Persistent, Bioaccumulative and Toxic substance; PICCS - Philippines Inventory of Chemicals and Chemical Substances; (Q)SAR - (Quantitative) Structure Activity Relationship; REACH - Regulation (EC) No 1907/2006 of the European Parliament and of the Council concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals; RID - Regulations concerning the International Carriage of Dangerous Goods by Rail; SADT - Self-Accelerating Decomposition Temperature; SDS - Safety Data Sheet; SVHC - Substance of very

SAFETY DATA SHEET

According to REACH Regulation (EC) No 1907/2006, as amended by UK REACH Regulations SI 2019/758

ETHYLENEDIAMINE (EDA)

| | | | |
|---------|----------------|---------|---------------------------------|
| Version | Revision Date: | GB / EN | Date of last issue: 02.02.2023 |
| 6.2 | 21.03.2023 | | Date of first issue: 20.12.2012 |

high concern; TCSI - Taiwan Chemical Substance Inventory; TECl - Thailand Existing Chemicals Inventory; TSCA - Toxic Substances Control Act (United States); UN - United Nations; UNRTDG - United Nations Recommendations on the Transport of Dangerous Goods; vPvB - Very Persistent and Very Bioaccumulative

Further information

This safety datasheet only contains information relating to safety and does not replace any product information or product specification.

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

GB / EN