

**Safety data sheet**  
according to 1907/2006/EC, Article 31

Printing date 22.03.2021

Version number 5

Revision: 22.03.2021

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

### 1.1 Product identifier

Trade name: **TECHNOVIT EPOX Hardener Regular**

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

No further relevant information available.

Application of the substance / the mixture Resin for metallographic testing

### 1.3 Details of the supplier of the safety data sheet

#### Manufacturer/Supplier:

Kulzer GmbH  
Leipziger Straße 2, 63450 Hanau (Germany)  
Tel.: +49 (0)6181 9689-2570 (Wehrheim)

Informing department: email: [technik.wehrheim@kulzer-dental.com](mailto:technik.wehrheim@kulzer-dental.com)

### 1.4 Emergency telephone number: Emergency CONTACT (24-Hour-Number): +49 (0)6132-84463

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

#### Classification according to Regulation (EC) No 1272/2008

Acute Tox. 4	H302 Harmful if swallowed.
Skin Corr. 1C	H314 Causes severe skin burns and eye damage.
Eye Dam. 1	H318 Causes serious eye damage.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Aquatic Acute 1	H400 Very toxic to aquatic life.
Aquatic Chronic 1	H410 Very toxic to aquatic life with long lasting effects.

### 2.2 Label elements

#### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

#### Hazard pictograms



GHS05 GHS07 GHS09

#### Signal word Danger

#### Hazard-determining components of labelling:

N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether  
Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia  
1,3-Cyclohexanedimethanamine  
Toluene-4-sulphonic acid monohydrate

#### Hazard statements

H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H410 Very toxic to aquatic life with long lasting effects.

#### Precautionary statements

P260 Do not breathe dust/fume/gas/mist/vapours/spray.  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].

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P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P405 Store locked up.

- 2.3 Other hazards -
- Results of PBT and vPvB assessment
- PBT: Not applicable.
- vPvB: Not applicable.

### SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

· Description: -

· Dangerous components:

CAS: 84144-79-6 EINECS: 282-199-6 Reg.nr.: 01-2120762088-49-xxxx	N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether Skin Corr. 1C, H314; Eye Dam. 1, H318 Aquatic Acute 1, H400; Aquatic Chronic 1, H410 Acute Tox. 4, H302; Skin Sens. 1, H317	≥50-≤70%
CAS: 9046-10-0 EC number: 618-561-0 Reg.nr.: 01-2119557899-12-xxxx	Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia Skin Corr. 1C, H314; Eye Dam. 1, H318 Aquatic Chronic 3, H412	≥20-<25%
CAS: 2579-20-6 EINECS: 219-941-5	1,3-Cyclohexanedimethanamine Skin Corr. 1A, H314; Eye Dam. 1, H318 Acute Tox. 4, H302; Acute Tox. 4, H312 Aquatic Chronic 3, H412	≥5-≤10%
CAS: 67762-41-8 EINECS: 267-019-6	Alcohols, C10-16 Aquatic Acute 1, H400	≥2.5-≤10%
CAS: 6192-52-5 EINECS: 203-180-0 Reg.nr.: 01-2119538811-39-xxxx	Toluene-4-sulphonic acid monohydrate Skin Corr. 1B, H314 Specific concentration limits: Skin Corr. 1B; H314: C ≥ 20 % Skin Irrit. 2; H315: 1 % ≤ C < 20 % Eye Dam. 1; H318: C ≥ 1 %	≥1-≤5%
CAS: 128-37-0 EINECS: 204-881-4 Reg.nr.: 01-2119565113-46-xxxx	2,6-di-tert-butyl-p-cresol Aquatic Acute 1, H400; Aquatic Chronic 1, H410	≥0.25-<1%
CAS: 111-40-0 EINECS: 203-865-4 Reg.nr.: 01-2119473793-27-xxxx	2,2'-iminodiethylamine Acute Tox. 2, H330 Skin Corr. 1B, H314; Eye Dam. 1, H318 Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1B, H317; STOT SE 3, H335	≥0.1-<1%

· Additional information For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

#### 4.1 Description of first aid measures

· General information

Instantly remove any clothing soiled by the product.  
Personal protection for the First Aider.

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Take affected persons out of danger area and instruct to lie down.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**· After inhalation**

Supply fresh air or oxygen; call for doctor.

In case of unconsciousness bring patient into stable side position for transport.

**· After skin contact**

Instantly wash with water and soap and rinse thoroughly.

Immediate medical treatment necessary. Failure to treat burns can prevent wounds from healing.

**· After eye contact**

Rinse opened eye for several minutes under running water. Then consult doctor.

Remove contact lenses, if present and easy to do. Continue rinsing.

Use eye protection.

**· After swallowing**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; instantly call for medical help.

**· 4.2 Most important symptoms and effects, both acute and delayed Allergic reactions****· 4.3 Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

**SECTION 5: Firefighting measures****· 5.1 Extinguishing media****· Suitable extinguishing agents**

Carbon dioxide

Alcohol-resistant foam

Sand

Fire-extinguishing powder

**· 5.2 Special hazards arising from the substance or mixture**

Can be released in case of fire

Carbon dioxide (CO<sub>2</sub>)

Carbon monoxide (CO)

Nitrogen oxides (NO<sub>x</sub>)

Formation of toxic gases is possible during heating or in case of fire.

**· 5.3 Advice for firefighters****· Protective equipment:**

Wear self-contained breathing apparatus.

(EN 133)

**· Additional information** Cool endangered containers with water spray jet.**SECTION 6: Accidental release measures****· 6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

Avoid contact with eyes and skin.

Do not breathe vapor / mist / gas.

Ensure adequate ventilation

**· 6.2 Environmental precautions:**

Do not allow to enter drainage system, surface or ground water.

Do not allow to enter the ground/soil.

**· 6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (diatomite, universal binders, for small amounts tissues).

Send for recovery or disposal in suitable containers.

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· **6.4 Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for information on disposal.

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**SECTION 7: Handling and storage**

· **7.1 Precautions for safe handling**

Wear protective equipment. Keep unprotected persons away.

Avoid contact with eyes and skin.

Keep containers tightly sealed.

Do not breathe vapor / mist / gas.

Prevent formation of aerosols.

Ensure good ventilation/exhaustion at the workplace.

· **Handling**

do not mix with

organic peroxides

Strong oxidizers

Strong acids

· **Information about protection against explosions and fires:** Protect from heat.

· **7.2 Conditions for safe storage, including any incompatibilities**

· **Storage**

· **Requirements to be met by storerooms and containers:**

Store in cool, dry place in tightly closed containers.

· **Information about storage in one common storage facility:** Store away from foodstuffs.

· **Further information about storage conditions:** None.

· **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

· **8.1 Control parameters**

· **Components with critical values that require monitoring at the workplace:**

**111-40-0 2,2'-iminodiethylamine**

WEL (Great Britain)	Long-term value: 4.3 mg/m <sup>3</sup> , 1 ppm
	Sk

· **DNELs**

**84144-79-6 N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether**

Dermal	worker industr., l.te., syst.	0.666 mg/Kg/d (nd)
Inhalative	worker profess., l.te., syst.	2.35 mg/m <sup>3</sup> (nd)

**9046-10-0 Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**

Dermal	worker industr., l.te., syst.	2.5 mg/Kg/d (nd)
Inhalative	worker profess., l.te., syst.	10.58 mg/m <sup>3</sup> (nd)

**2579-20-6 1,3-Cyclohexanedimethanamine**

Dermal	worker industr., acute, syst.	25.2 mg/Kg/d (nd)
	worker industr., l.te., syst.	0.1 mg/Kg/d (nd)
Inhalative	worker industr., l.te., local	0.00947 mg/m <sup>3</sup> (nd)

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**6192-52-5 Toluene-4-sulphonic acid monohydrate**

Oral	ge.pop., l.te, syst.	2.5 mg/Kg (nd)
Dermal	worker industr., l.te., syst.	7.6 mg/Kg/d (nd)
	ge.pop., l.te, syst.	2.5 mg/Kg/d (nd)
Inhalative	worker industr., l.te., syst.	53.6 mg/m3 (nd)
	ge.pop., l.te, syst.	8.7 mg/m3 (nd)

**128-37-0 2,6-di-tert-butyl-p-cresol**

Oral	ge.pop., l.te, syst.	0.25 mg/Kg (nd)
Dermal	worker industr., l.te., syst.	0.5 mg/Kg/d (nd)
	ge.pop., l.te, syst.	0.25 mg/Kg/d (nd)
Inhalative	worker industr., l.te., syst.	1.76 mg/m3 (nd)
	ge.pop., l.te, syst.	0.435 mg/m3 (nd)

**111-40-0 2,2'-iminodiethylamine**

Dermal	worker industr., l.te., syst.	11.4 mg/Kg/d (nd)
	worker industr., l.te., local	1.1 mg/Kg/d (nd)
	ge.pop., acu., syst.	4.88 mg/Kg/d (nd)
	ge.pop., l.te, syst.	4.88 mg/Kg/d (nd)
Inhalative	worker industr., acute, syst.	92.1 mg/m3 (nd)
	worker industr., acute, local	0.87 mg/m3 (nd)
	worker industr., l.te., syst.	15.4 mg/m3 (nd)
	worker industr., l.te., local	0.87 mg/m3 (nd)
	ge.pop., acu., syst.	27.5 mg/m3 (nd)
	ge.pop., l.te, syst.	4.6 mg/m3 (nd)

**PNECs**
**84144-79-6 N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether**

freshwater	0.00017 mg/l (nd)
marine water	0.000017 mg/l (nd)
STP	0.66 mg/l (nd)
sedim., dw, fre.wat.	0.524 mg/Kg (nd)
sedim., dw, mar.wat.	0.0524 mg/Kg (nd)
soil,dw	0.524 mg/Kg (nd)

**9046-10-0 Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**

freshwater	0.015 mg/l (nd)
marine water	0.014 mg/l (nd)
STP	7.5 mg/l (nd)
sedim., dw, fre.wat.	0.132 mg/Kg (nd)
sedim., dw, mar.wat.	0.125 mg/Kg (nd)
soil,dw	0.018 mg/Kg (nd)

**2579-20-6 1,3-Cyclohexanedimethanamine**

freshwater	0.033 mg/l (nd)
marine water	0.003 mg/l (nd)
STP	10 mg/l (nd)
sedim., dw, fre.wat.	0.218 mg/Kg (nd)

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sedim., dw, mar.wat.	0.022 mg/Kg (nd)
soil,dw	0.024 mg/Kg (nd)
<b>6192-52-5 Toluene-4-sulphonic acid monohydrate</b>	
freshwater	0.073 mg/l (nd)
marine water	0.007 mg/l (nd)
STP	58 mg/l (nd)
sedim., dw, fre.wat.	0.058 mg/Kg (nd)
sedim., dw, mar.wat.	0.006 mg/Kg (nd)
soil,dw	0.016 mg/Kg (nd)
<b>128-37-0 2,6-di-tert-butyl-p-cresol</b>	
freshwater	0.000199 mg/l (nd)
marine water	0.00002 mg/l (nd)
STP	0.017 mg/l (nd)
sedim., dw, fre.wat.	0.458 mg/Kg (nd)
sedim., dw, mar.wat.	0.046 mg/Kg (nd)
soil,dw	0.054 mg/Kg (nd)
<b>111-40-0 2,2'-iminodiethylamine</b>	
freshwater	0.56 mg/l (nd)
marine water	0.056 mg/l (nd)
STP	6 mg/l (nd)
sedim., dw, fre.wat.	1,072 mg/Kg (nd)
sedim., dw, mar.wat.	107.2 mg/Kg (nd)
soil,dw	7.97 mg/Kg (nd)

· **Additional information:** The lists that were valid during the compilation were used as basis.

## · 8.2 Exposure controls

### · Personal protective equipment

#### · General protective and hygienic measures

Keep away from foodstuffs, beverages and food.  
Instantly remove any soiled and impregnated garments.  
Wash hands during breaks and at the end of the work.  
Avoid contact with the eyes and skin.

· **Breathing equipment:** Use breathing protection in case of insufficient ventilation.

#### · Protection of hands:

Check protective gloves prior to each use for their proper condition.  
The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

chemical protection gloves are suitable, which are tested according to EN 374

#### · Material of gloves

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

Chloroprene rubber, CR

#### · Penetration time of glove material

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:** eye protection (EN 166)

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- **Body protection:** Protective work clothing.
- **Limitation and supervision of exposure into the environment**  
Do not allow to enter the ground/soil.  
Do not allow to enter drainage system, surface or ground water.

### SECTION 9: Physical and chemical properties

#### · 9.1 Information on basic physical and chemical properties

##### · General Information

##### · Appearance:

- **Form:** Fluid
- **Colour:** Light yellow
- **Smell:** Ammonia-like
- **Odour threshold:** Not determined.

· **pH-value at 20 °C:** >7

##### · Change in condition

- **Melting point/freezing point:** Not determined
- **Initial boiling point and boiling range:** >100 °C

· **Flash point:** >100 °C

· **Inflammability (solid, gaseous)** Not applicable.

· **Decomposition temperature:** Not determined.

· **Self-inflammability:** Product is not selfigniting.

· **Explosive properties:** Product is not explosive.

##### · Critical values for explosion:

- **Lower:** Not determined.
- **Upper:** Not determined.

· **Steam pressure at 21 °C:** 14.7 hPa

· **Density at 20 °C** 1.02 g/cm<sup>3</sup>

- **Relative density** Not determined.
- **Vapour density** Not determined.
- **Evaporation rate** Not determined.

##### · Solubility in / Miscibility with

· **Water:** Not determined.

· **Partition coefficient: n-octanol/water:** Not determined.

##### · Viscosity:

- **dynamic at 20 °C:** 500 mPas
- **kinematic:** Not determined.

##### · Solvent content:

· **Solids content:** 0.0 %

· **9.2 Other information** No further relevant information available.

### SECTION 10: Stability and reactivity

· **10.1 Reactivity** No further relevant information available.

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- **10.2 Chemical stability**
  - **Conditions to be avoided:** No decomposition if used and stored according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:**
  - organic peroxides
  - Strong acids
  - Strong oxidizers
- **10.6 Hazardous decomposition products:** None
  - **Additional information:** -

**SECTION 11: Toxicological information**

· **11.1 Information on toxicological effects**

· **Acute toxicity**

Harmful if swallowed.

· **LD/LC50 values that are relevant for classification:**

**84144-79-6 N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether**

Oral	LD50	300-<1,000 mg/kg (rat) (OECD 423)
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**9046-10-0 Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**

Oral	LD50	2,885 mg/kg (rat) (OECD 401)
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Dermal	LD50	2,980 mg/kg (rabbit) (OECD 402)
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Inhalative	LC0/4h	0.74 mg/L (rat) (OECD 403)
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**2579-20-6 1,3-Cyclohexanedimethanamine**

Oral	LD50	>300-2,000 mg/kg (rat) (OECD 423)
------	------	-----------------------------------

**128-37-0 2,6-di-tert-butyl-p-cresol**

Oral	LD50	>6,000 mg/kg (rat) (OECD 401)
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Dermal	LD50	>2,000 mg/kg (rat) (OECD 402)
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**111-40-0 2,2'-iminodiethylamine**

Oral	LD50	1,553 mg/kg (rat)
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Dermal	LD50	1,045 mg/kg (rabbit)
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· **Primary irritant effect:**

· **Skin corrosion/irritation**

Causes severe skin burns and eye damage.

· **Serious eye damage/irritation**

Causes serious eye damage.

· **Respiratory or skin sensitisation**

May cause an allergic skin reaction.

· **Additional toxicological information:**

· **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

· **Germ cell mutagenicity** Based on available data, the classification criteria are not met.

· **Carcinogenicity** Based on available data, the classification criteria are not met.

· **Reproductive toxicity** Based on available data, the classification criteria are not met.

· **STOT-single exposure** Based on available data, the classification criteria are not met.

· **STOT-repeated exposure** Based on available data, the classification criteria are not met.

· **Aspiration hazard** Based on available data, the classification criteria are not met.

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**SECTION 12: Ecological information**

**12.1 Toxicity**

**Aquatic toxicity:**

**84144-79-6 N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether**

EC50/48h	>11-<17 mg/l (nd) (OECD 202)
LC50/96h	>0.66 mg/l (fish) (OECD 203)
ErC50 / 72 h	0.046 mg/l (algae) (OECD 201)
NOEC / 96h	>0.66 mg/l (fish) (OECD 203)
NOEC / 48h	6.4 mg/l (daphnia) (OECD 202)
ErC10/72h	0.17 mg/L (algae) (OECD 201)

**9046-10-0 Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**

EC50/48h	80 mg/l (daphnia) (OECD 202)
LC50/96h	772.14 mg/l (fish) (OECD 203)
ErC50 / 72 h	15 mg/l (algae) (EU C.3)
NOEC / 72h	0.32 mg/l (algae) (OECD 201)
NOEC / 96h	600 mg/l (fish) (OECD 203)
NOEC / 48h	18 mg/l (daphnia) (OECD 202)
ErC10/72h	1.4 mg/L (algae) (EU C.3)

**2579-20-6 1,3-Cyclohexanedimethanamine**

EC50/48h	33.1 mg/l (daphnia) (EU C2.)
LC50/96h	130 mg/l (fish) (OECD 203)
ErC50 / 72 h	56.7 mg/l (algae) (OECD 201)
NOEC / 72h	13.7 mg/l (algae) (OECD 201)
NOEC / 96h	100 mg/l (fish) (OECD 203)
NOEC / 48h	19.1 mg/l (daphnia) (EU C2.)
ErC10/72h	25 mg/L (algae) (OECD 201)

**6192-52-5 Toluene-4-sulphonic acid monohydrate**

EC50/48h	>103 mg/l (daphnia) (OECD 202)
LC50/96h	>500 mg/l (fish) (OECD 203)
ErC50 / 72 h	73 mg/l (algae) (OECD 201)
NOEC / 72h	44.8 mg/l (algae) (OECD 201)

**128-37-0 2,6-di-tert-butyl-p-cresol**

EC50/72h	>0.4 mg/l (algae) (EU C.3)
EC50/21d	0.096 mg/L (daphnia) (OECD 211)
EC50/48h	0.48 mg/l (daphnia) (OECD 202)
LC50/96h	>0.57 mg/l (fish) (OECD 203)
NOEC / 21d	0.069 mg/l (daphnia) (OECD 211)
NOEC / 48h	0.15 mg/l (daphnia) (OECD 202)
NOEC/ 32d	0.053 mg/L (fish) (OECD 210)

**111-40-0 2,2'-iminodiethylamine**

LC50/96h	430 mg/l (fish) (EU C.1)
NOEC / 21d	5.6 mg/l (daphnia) (EU C.20)
	>10 mg/l (fish) (OECD 210)

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ErC50 / 72 h	1,164 mg/l (algae) (OECD 201)
NOEC / 72h	10 mg/l (algae) (OECD 201)

**12.2 Persistence and degradability**

**84144-79-6 N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether**

Biodegradation 0 % /28d (nd) (OECD 301 E)

**9046-10-0 Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia**

Biodegradation 0 % /28d (nd) (OECD 301B; ISO/ 9439/ EEC 92/69/V, C.4-C)

**2579-20-6 1,3-Cyclohexanedimethanamine**

Biodegradation 29 % /28d (nd) (OECD 301B; ISO/ 9439/ EEC 92/69/V, C.4-C)

**111-40-0 2,2'-iminodiethylamine**

Biodegradation 87 % /21d (nd) (OECD 301D)

**12.3 Bioaccumulative potential**

**111-40-0 2,2'-iminodiethylamine**

Bloconcentration factor (BCF) >2.8-≤6.3 (fish) (OECD 305 E)

**12.4 Mobility in soil** No further relevant information available.

**Ecotoxicological effects:**

**Remark:**

Harmful to aquatic organisms  
 Avoid transfer into the environment.  
 Harmful to fish

**Additional ecological information:**

**General notes:**

Must not reach sewage water or drainage ditch undiluted or unneutralised.  
 Harmful to aquatic organisms  
 Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.  
 Danger to drinking water if even extremely small quantities leak into soil.

**12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.  
 · **vPvB:** Not applicable.

**12.6 Other adverse effects** No further relevant information available.

**SECTION 13: Disposal considerations**

**13.1 Waste treatment methods**

**Recommendation**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.  
 Disposal must be made according to official regulations.

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**SECTION 14: Transport information**

**14.1 UN-Number**

· **ADR, IMDG, IATA**

UN2735

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**· 14.2 UN proper shipping name**

· **ADR**

2735 AMINES, LIQUID, CORROSIVE, N.O.S. (N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether, Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia)

· **IMDG**

AMINES, LIQUID, CORROSIVE, N.O.S. (N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether, Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia), MARINE POLLUTANT

· **IATA**

AMINES, LIQUID, CORROSIVE, N.O.S. (N-(2-Aminoethyl)-1,2-ethanediamine reaction products with glycidyl tolyl ether, Reaction products of di-, tri- and tetra-propoxylated propane-1,2-diol with ammonia)

**· 14.3 Transport hazard class(es)**

· **ADR**



· **Class**  
· **Label**

8 (C7) Corrosive substances.  
8

· **IMDG**



· **Class**  
· **Label**

8 Corrosive substances.  
8

· **IATA**



· **Class**  
· **Label**

8 Corrosive substances.  
8

**· 14.4 Packing group**

· **ADR, IMDG, IATA**

III

**· 14.5 Environmental hazards:**

· **Marine pollutant:**

Symbol (fish and tree)

· **Special marking (ADR):**

Symbol (fish and tree)

**· 14.6 Special precautions for user**

· **Kemler Number:**

Warning: Corrosive substances.

· **EMS Number:**

80

F-A,S-B

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· Segregation groups	Alkalis
· Stowage Category	A
· Segregation Code	SG35 Stow "separated from" SGG1-acids
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· Transport/Additional information:	-
· ADR	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· Transport category	3
· Tunnel restriction code	E
· IMDG	
· Limited quantities (LQ)	5L
· Excepted quantities (EQ)	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· UN "Model Regulation":	UN 2735 AMINES, LIQUID, CORROSIVE, N.O.S. (N-(2-AMINOETHYL)-1,2-ETHANEDIAMINE REACTION PRODUCTS WITH GLYCIDYL TOLYL ETHER, REACTION PRODUCTS OF DI-, TRI- AND TETRA-PROPOXYLATED PROPANE-1,2-DIOL WITH AMMONIA), 8, III

**SECTION 15: Regulatory information**

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
  - Directive 2012/18/EU
    - Named dangerous substances - ANNEX I None of the ingredients is listed.
    - Seveso category E1 Hazardous to the Aquatic Environment
    - Qualifying quantity (tonnes) for the application of lower-tier requirements 100 t
    - Qualifying quantity (tonnes) for the application of upper-tier requirements 200 t
  - National regulations
    - Information about limitation of use:  
Employment restrictions concerning young persons must be observed.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

**SECTION 16: Other information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

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**· Relevant phrases**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H317 May cause an allergic skin reaction.  
H318 Causes serious eye damage.  
H330 Fatal if inhaled.  
H335 May cause respiratory irritation.  
H400 Very toxic to aquatic life.  
H410 Very toxic to aquatic life with long lasting effects.  
H412 Harmful to aquatic life with long lasting effects.

**· Abbreviations and acronyms:**

ADR: Accord relatif au transport international des marchandises dangereuses par route (European Agreement Concerning the International Carriage of Dangerous Goods by Road)

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

GHS: Globally Harmonised System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

PBT: Persistent, Bioaccumulative and Toxic

vPvB: very Persistent and very Bioaccumulative

Acute Tox. 4: Acute toxicity – Category 4

Acute Tox. 2: Acute toxicity – Category 2

Skin Corr. 1A: Skin corrosion/irritation – Category 1A

Skin Corr. 1B: Skin corrosion/irritation – Category 1B

Skin Corr. 1C: Skin corrosion/irritation – Category 1C

Eye Dam. 1: Serious eye damage/eye irritation – Category 1

Skin Sens. 1: Skin sensitisation – Category 1

Skin Sens. 1B: Skin sensitisation – Category 1B

STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

Aquatic Acute 1: Hazardous to the aquatic environment - acute aquatic hazard – Category 1

Aquatic Chronic 1: Hazardous to the aquatic environment - long-term aquatic hazard – Category 1

Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

**· Sources**

(EC) 1272/2008: classification, labelling and packaging of substances and mixtures

(EC) 1907/2006: REACH

ADR/RID/ADN - IMDG - IATA: transport of dangerous goods by road, rail, inland waterway, with maritime vessels and for the air transport

**· \* Data compared to the previous version altered.**

GB