

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

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

1.1 Product identifier

- Trade name: **Epoxy-Remover**
- Article number: 11983, 11977/11978

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

- Application of the substance / the mixture: No further relevant information available.
- Paint remover

1.3 Details of the supplier of the safety data sheet

- Manufacturer/Supplier: AKEMI chemisch technische Spezialfabrik GmbH
Lechstrasse 28
D 90451 Nürnberg
Tel. +49(0)911-642960
Fax. +49(0)911-644456
e-mail info@akemi.de

- Further information obtainable from: Laboratory

1.4 Emergency telephone number:

Product Safety Department AKEMI chemisch technische Spezialfabrik GmbH
Tel. +49(0)911-64296-59
Reachable during the following office hours:
Monday – Thursday from 07:30 a.m. to 16:30 p.m.
Friday from 07:30 a.m. to 13:30 p.m.
+44 (171) 635 91 91
National Poison Inform. Centre
Medical Toxicology Unit
Avalonley Road
London SE14 5ER

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

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



GHS08 health hazard

Repr. 1B H360Df May damage the unborn child. Suspected of damaging fertility.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H302 Harmful if swallowed.

Acute Tox. 4 H332 Harmful if inhaled.

STOT SE 3 H335 May cause respiratory irritation.

2.2 Label elements

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

- Hazard pictograms

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



GHS05 GHS07 GHS08

(Contd. on page 2)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover






(Contd. of page 1)

<ul style="list-style-type: none"> · <u>Signal word</u> · <u>Hazard-determining components of labelling:</u> · <u>Hazard statements</u> · <u>Precautionary statements</u> 	<p>Danger</p> <p>N-ethyl-2-pyrrolidone 2-aminoethanol</p> <p>H302+H332 Harmful if swallowed or if inhaled. H314 Causes severe skin burns and eye damage. H360Df May damage the unborn child. Suspected of damaging fertility. H335 May cause respiratory irritation.</p> <p>P101 If medical advice is needed, have product container or label at hand.</p> <p>P102 Keep out of reach of children. P103 Read label before use. P260 Do not breathe mist/vapours/spray. P271 Use only outdoors or in a well-ventilated area. P280 Wear protective gloves/protective clothing/eye protection/face protection.</p> <p>P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower]. P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.</p> <p>P310 Immediately call a POISON CENTER/doctor. P403+P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up. P501 Dispose of contents/container in accordance with local/regional/national/international regulations.</p>
<ul style="list-style-type: none"> · 2.3 Other hazards · Results of PBT and vPvB assessment · <u>PBT:</u> · <u>vPvB:</u> 	<p>Not applicable. Not applicable.</p>

SECTION 3: Composition/information on ingredients**3.2 Chemical characterisation: Mixtures**

· Description: Mixture of substances listed below with nonhazardous additions.

· Dangerous components:

CAS: 2687-91-4 EINECS: 220-250-6 Index number: 616-208-00-5 Reg.nr.: 01-2119472138-36-xxxx	N-ethyl-2-pyrrolidone  Repr. 1B, H360Df  Eye Dam. 1, H318  Acute Tox. 4, H302	50-100%
CAS: 141-43-5 EINECS: 205-483-3 Index number: 603-030-00-8 Reg.nr.: 01-2119486455-28	2-aminoethanol  Skin Corr. 1B, H314  Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; STOT SE 3, H335	12.5-25%

· 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: Immediately remove any clothing soiled by the product.
- After inhalation: In case of unconsciousness place patient stably in side position for transportation.
- After skin contact: Immediately wash with water and soap and rinse thoroughly.
- After eye contact: Rinse opened eye for several minutes under running water. Then consult a doctor.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

(Contd. of page 2)

- After swallowing: Drink plenty of water and provide fresh air. Call for a doctor immediately.
 - **4.2 Most important symptoms and effects, both acute and delayed**
 - **Hazards**
 - **4.3 Indication of any immediate medical attention and special treatment needed**
- No further relevant information available.
Danger of impaired breathing.
No further relevant information available.

SECTION 5: Firefighting measures

- **5.1 Extinguishing media**
 - **Suitable extinguishing agents:** CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
 - **5.2 Special hazards arising from the substance or mixture**
 - **5.3 Advice for firefighters**
 - **Protective equipment:** Wear self-contained respiratory protective device.
Wear fully protective suit.
- No further relevant information available.

SECTION 6: Accidental release measures

- **6.1 Personal precautions, protective equipment and emergency procedures**
- **6.2 Environmental precautions:** Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Dilute with plenty of water.
Do not allow to enter sewers/ surface or ground water.
- **6.3 Methods and material for containment and cleaning up:** Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Use neutralising agent.
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
- **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 disposal information.

SECTION 7: Handling and storage

- **7.1 Precautions for safe handling** Keep receptacles tightly sealed.
Ensure good ventilation/exhaustion at the workplace.
- **Information about fire - and explosion protection:** No special measures required.
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Protect from frost.
Keep container tightly sealed.

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

(Contd. of page 3)

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

SECTION 8: Exposure controls/personal protection

· Additional information about design of technical facilities: No further data; see item 7.

· 8.1 Control parameters

· Ingredients with limit values that require monitoring at the workplace:

141-43-5 2-aminoethanol

WEL	Short-term value: 7.6 mg/m ³ , 3 ppm
	Long-term value: 2.5 mg/m ³ , 1 ppm
	Sk

· DNELs

2687-91-4 N-ethyl-2-pyrrolidone

Dermal	DNEL (Langzeit-wiederholt)	8 mg/kg bw/day (ARB)
		4 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	40 mg/m ³ Air (ARB)
		10 mg/m ³ Air (BEV)

141-43-5 2-aminoethanol

Oral	DNEL (Langzeit-wiederholt)	3.75 mg/kg bw/day (BEV)
Dermal	DNEL (Langzeit-wiederholt)	1 mg/kg bw/day (ARB)
		0.24 mg/kg bw/day (BEV)
Inhalative	DNEL (Langzeit-wiederholt)	3.3 mg/m ³ Air (ARB)
		2 mg/m ³ Air (BEV)

· PNECs

2687-91-4 N-ethyl-2-pyrrolidone

PNEC (wässrig)	0.025 mg/l (MW)
	0.25 mg/l (SW)
PNEC (fest)	0.235 mg/kg Trockengew (BO)
	0.191 mg/kg Trockengew (MWS)
	1.91 mg/kg Trockengew (SWS)

141-43-5 2-aminoethanol

PNEC (wässrig)	100 mg/l (KA)
	0.0085 mg/l (MW)
	0.085 mg/l (SW)
	0.025 mg/l (WAS)
PNEC (fest)	0.035 mg/kg Trockengew (BO)
	0.0425 mg/kg Trockengew (MWS)
	0.425 mg/kg Trockengew (SWS)

· Additional information: The lists valid during the making were used as basis.

· 8.2 Exposure controls

· Personal protective equipment:
 · General protective and hygienic measures:

Keep away from foodstuffs, beverages and feed.
 Immediately remove all soiled and contaminated clothing
 Wash hands before breaks and at the end of work.
 Do not inhale gases / fumes / aerosols.
 Avoid contact with the eyes and skin.
 Do not eat, drink, smoke or sniff while working.

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

(Contd. of page 4)

· Respiratory protection:

Use skin protection cream for skin protection.
Clean skin thoroughly immediately after handling the product.
Use suitable respiratory protective device in case of insufficient ventilation.
Filter AX

· Protection of hands:

Preventive skin protection by use of skin-protecting agents is recommended.
After use of gloves apply skin-cleaning agents and skin cosmetics.
Skin protection agent recommendation for preventive skin shelter without use of protective gloves:

STOKODERM (<http://www.stoko.com>)

Skin protection agent recommendation for preventive skin shelter in application and combination of protective gloves:

STOKO EMULSION (<http://www.stoko.com>)

Skin protection recommendation for skin cleaning after product handling:

FRAPANTOL (<http://www.stoko.com>)

Skin protection agent recommendation for skin aftercare:

STOKO VITAN (<http://www.stoko.com>)

The protection gloves to be used have to comply with the specifications of the directive 89/686/EC and the directive derived decree EN374, respectively, e.g. the above listed protection glove type. The mentioned permeation times' data were generated and verified with material samples of the recommended protection glove type in the scope of laboratory analyses of the company KCL GmbH in compliance with EN374.

This recommendation refers exclusively to the material safety data sheet referenced product delivered by Akemi and the indicated field of application. In case of product dilution or in case of mixture with different substances or chemicals, and in condition of EN374 deviation the producer of CE-approved protection gloves must be contacted for detailed information (e.g., KCL GmbH, Germany, 36124 Eichenzell, internet: <http://www.kcl.de>).



Protective gloves

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

· Material of gloves

Butyl rubber, BR

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.

· 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.

Value for the permeation: Level ≤ 6, 480 min

· For the permanent contact gloves made of the following materials are suitable:

Butyl rubber, BR

Butoject (KCL, Art_No. 897, 898)

· As protection from splashes gloves made of the following materials are suitable:

Chloroprene rubber, CR

Camapren (KCL, Art_No. 720, 722, 726)

Fluorocarbon rubber (Viton)

Vitoject (KCL, Art_No. 890)

· Not suitable are gloves made of the following materials:

Nitrile rubber, NBR

· Eye protection:



Tightly sealed goggles

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

· Body protection: Protective work clothing

(Contd. of page 5)

SECTION 9: Physical and chemical properties

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

· General Information

· Appearance:

Form: Fluid
Colour: Yellowish
Odour: Characteristic

· pH-value: Not applicable

· Change in condition

Melting point/freezing point: Undetermined.
Initial boiling point and boiling range: 202 °C

· Flash point: 93 °C

· Ignition temperature: 385 °C

· Auto-ignition temperature: Product is not selfigniting.

· Explosive properties: Product does not present an explosion hazard.

· Explosion limits:

Lower: 1.3 Vol %
Upper: 9.5 Vol %

· Vapour pressure at 20 °C: 0.3 hPa

· Density at 20 °C: 1.03 g/cm³

· Solubility in / Miscibility with water:

Fully miscible.

· Viscosity:

Dynamic at 20 °C: 22,000 mPas
Kinematic: Not determined.

· Solvent content:

Organic solvents: 97.1 %

Solids content: 7.5 %

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

SECTION 10: Stability and reactivity

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

· **10.2 Chemical stability**

· Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

· **10.3 Possibility of hazardous reactions**

Reacts with strong acids and oxidising agents.

· **10.4 Conditions to avoid**

No further relevant information available.

· **10.5 Incompatible materials:**

No further relevant information available.

· **10.6 Hazardous decomposition products:**

Carbon monoxide and carbon dioxide

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

(Contd. of page 6)

SECTION 11: Toxicological information**11.1 Information on toxicological effects**

· Acute toxicity Harmful if swallowed or if inhaled.

· LD/LC50 values relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	1,327 mg/kg (rat)
Dermal	LD50	5,277 mg/kg (rbt)
Inhalative	LC50/4 h	>5.88 mg/l

2687-91-4 N-ethyl-2-pyrrolidone

Oral	LD50	1,350 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
Inhalative	LC50/4 h	>5.1 mg/l (rat)

141-43-5 2-aminoethanol

Oral	LD50	1,089 mg/kg (rat)
Dermal	LD50	1,025 mg/kg (rbt)
Inhalative	LC50/4h	1,487 mg/m ³ (rat)
	LC50/4 h	11 mg/l (ATE)

- 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 Based on available data, the classification criteria are not met.
- 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 May damage the unborn child. Suspected of damaging fertility.
- STOT-single exposure May cause respiratory irritation.
- 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.

SECTION 12: Ecological information**12.1 Toxicity**

· Aquatic toxicity:

2687-91-4 N-ethyl-2-pyrrolidone

EC50/48h	>104 mg/l (daphnia magna) (OECD 202)
EC50/16h	>1,000 mg/l (pseudomonas putida) (DIN 38412)
EC20/0.5h	>1,000 mg/l (BES) (OECD 209)
EC50/30min	>1,000 mg/l (BES)
EC50/72h	>101 mg/l (Desmodesmus subspicatus) (OECD 201)
LC50/96h	464-999 mg/l (Brachydanio rerio) (OECD 203)

141-43-5 2-aminoethanol

EC50	>1,000 mg/l (BES) (OECD 209)
	110 mg/l (pseudomonas putida)
EC10/18h	87 mg/l (pseudomonas putida)
EC50/48h	65 mg/l (daphnia magna) (67/548/EWG, Anhang V, C.2.)
EC50/16h	110 mg/l (pseudomonas putida) (DIN 38412)
EC20/0.5h	>1,000 mg/l (BES) (OECD 209)

(Contd. on page 8)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

(Contd. of page 7)

EC50/72h	22 mg/l (Scenedesmus subspicatus) (EG 92/69) 2.5 mg/l (selenastrum capricornutum) (OECD 201)
LC50/96h	170 mg/l (carassius auratus) (APHA 1971) 349 mg/l (Cyprinus carpio) (OECD 203; 92/69 EG) 329 mg/l (lem)

· **12.2 Persistence and degradability**

No further relevant information available.

· **12.3 Bioaccumulative potential**

No further relevant information available.

· **12.4 Mobility in soil**

No further relevant information available.

· Additional ecological information:

· General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water

· **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 together with household garbage. Do not allow product to reach sewage system.

· European waste catalogue

20 00 00	MUNICIPAL WASTES (HOUSEHOLD WASTE AND SIMILAR COMMERCIAL, INDUSTRIAL AND INSTITUTIONAL WASTES) INCLUDING SEPARATELY COLLECTED FRACTIONS
20 01 00	separately collected fractions (except 15 01)
20 01 13*	solvents

· Uncleaned packaging:

· Recommendation:

Disposal must be made according to official regulations.

Empty contaminated packagings thoroughly. They may be recycled after thorough and proper cleaning.

* **SECTION 14: Transport information**

· **14.1 UN-Number**

· ADR, IMDG, IATA

UN2491

· **14.2 UN proper shipping name**

· ADR

2491 ETHANOLAMINE SOLUTION mixture

· IMDG, IATA

ETHANOLAMINE SOLUTION mixture

· **14.3 Transport hazard class(es)**

· ADR



· Class

8 (C7) Corrosive substances.

(Contd. on page 9)

GB

Safety data sheet

according to 1907/2006/EC, Article 31


Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

(Contd. of page 8)

· <u>Label</u>	8
· <u>IMDG, IATA</u>	
	
· <u>Class</u>	8 Corrosive substances.
· <u>Label</u>	8
· 14.4 Packing group	
· <u>ADR, IMDG, IATA</u>	III
· 14.5 Environmental hazards:	
· <u>Marine pollutant:</u>	No
· 14.6 Special precautions for user	Warning: Corrosive substances.
· <u>Danger code (Kemler):</u>	80
· <u>EMS Number:</u>	F-A,S-B
· <u>Segregation groups</u>	Alkalis
· <u>Stowage Category</u>	A
· <u>Segregation Code</u>	SG35 Stow "separated from" acids.
· 14.7 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.
· <u>Transport/Additional information:</u>	
· <u>ADR</u>	
· <u>Limited quantities (LQ)</u>	5L
· <u>Excepted quantities (EQ)</u>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>Transport category</u>	3
· <u>Tunnel restriction code</u>	E
· <u>IMDG</u>	
· <u>Limited quantities (LQ)</u>	5L
· <u>Excepted quantities (EQ)</u>	Code: E1 Maximum net quantity per inner packaging: 30 ml Maximum net quantity per outer packaging: 1000 ml
· <u>UN "Model Regulation":</u>	UN 2491 ETHANOLAMINE SOLUTION MIXTURE, 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.
- REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
- National regulations:
- Waterhazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water.
- VOC EU 998.3 g/l
- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

(Contd. on page 10)

GB

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 12.04.2018

Version number 7

Revision: 12.04.2018

Trade name: Epoxy-Remover

(Contd. of page 9)

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Relevant phrases
 - H302 Harmful if swallowed.
 - H312 Harmful in contact with skin.
 - H314 Causes severe skin burns and eye damage.
 - H318 Causes serious eye damage.
 - H332 Harmful if inhaled.
 - H335 May cause respiratory irritation.
 - H360Df May damage the unborn child. Suspected of damaging fertility.

- Recommended restriction of use
 - refer to Technical Data Sheet (TDS)

- Department issuing SDS: Laboratory
- Contact: Dieter Zimmermann
- Abbreviations and acronyms:
 - RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
 - ICAO: International Civil Aviation Organisation
 - ADR: Accord européen sur le transport 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
 - Skin Corr. 1B: Skin corrosion/irritation – Category 1B
 - Eye Dam. 1: Serious eye damage/eye irritation – Category 1
 - Repr. 1B: Reproductive toxicity – Category 1B
 - STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

- * Data compared to the previous version altered.
 - Adaptation in accordance with REACH directive 1907/2006/EC