

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

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

1.1 Product identifier

Trade name **Epoxy Conductive, Comp. A**

Article number: 6671

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 Coating

Uses advised against No further relevant information available.

1.3 Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Remmers GmbH
Bernhard-Remmers-Str. 13
D-49624 Lönningen / Germany
Tel.: +49(0)5432/83-0
Fax: +49(0)5432/3985

Remmers (UK) Limited
Unit 4 , Lloyds Court
Manor Royal, Crawley – West Sussex RH10 9QU
fon +44 (0) 1293 594 010
fax +44 (0) 1293 594 037

Information department:

Product Safety department: Phone: +44 (0) 1293 594 010
Email: sales@remmers.co.ukk

1.4 Emergency telephone number:

National Poisons Information Service (NPIS):
In England and Wales: NHS 111 - dial 111
In Scotland: NHS 24 - dial 111

24h-Transport Emergency Contact Phone Number:
within USA and Canada: 1-800-424-9300
outside USA and Canada: 001-703-527-3887

* SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

Skin Irrit. 2 H315 Causes skin irritation.

Eye Dam. 1 H318 Causes serious eye damage.

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

Signal word Danger

Hazard-determining components of labelling:

Linseed oil polymer with bisphenol A, bisphenol A diglycidyl ether, diethylenetriamine, formaldehyde, glycidyl Ph ether and pentaethylenehexamine

Hazard statements

H315 Causes skin irritation.

H318 Causes serious eye damage.

(Contd. on page 2)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

Trade name **Epoxy Conductive, Comp. A**

(Contd. of page 1)

Precautionary statements

- P264 Wash thoroughly after handling.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P301+P310 IF SWALLOWED: Immediately call a POISON CENTER/ doctor.
 P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Additional information:

EUH208 Contains 2,2'-iminodiethylamine, 3,6,9-triazaundecamethylenediamine, 3,6,9,12-tetra-azatetradecamethylenediamine. May produce an allergic reaction.

2.3 Other hazards**Results of PBT and vPvB assessment**

PBT: Not applicable.

vPvB: Not applicable.

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

Description: Mixture of the substances listed below with harmless additions.

Dangerous components [% w/w]:

CAS: 111-76-2 EINECS: 203-905-0 Index number: 603-014-00-0 Reg.nr.: 01-2119475108-36-XXXX	2-butoxyethanol Acute Tox. 4, H302; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319	5-10%
CAS: 68915-81-1	Linseed oil polymer with bisphenol A, bisphenol A diglycidyl ether, diethylenetriamine, formaldehyde, glycidyl Ph ether and pentaethylenehexamine Eye Dam. 1, H318; Skin Irrit. 2, H315	5-10%
CAS: 4067-16-7 EINECS: 223-775-9 Index number: 612-064-00-2 Reg.nr.: 01-2119485826-22-XXXX	3,6,9,12-tetra-azatetradecamethylenediamine Skin Corr. 1B, H314; Aquatic Acute 1, H400; Aquatic Chronic 1, H410; Skin Sens. 1, H317	≤0.5%
CAS: 111-40-0 EINECS: 203-865-4 Index number: 612-058-00-X Reg.nr.: 01-2119473793-27-XXXX	2,2'-iminodiethylamine Acute Tox. 2, H330; Skin Corr. 1B, H314; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317; STOT SE 3, H335	≤0.5%
CAS: 112-57-2 EINECS: 203-986-2 Index number: 612-060-00-0	3,6,9-triazaundecamethylenediamine Skin Corr. 1B, H314; Aquatic Chronic 2, H411; Acute Tox. 4, H302; Acute Tox. 4, H312; Skin Sens. 1, H317	≤0.5%

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**

If symptoms occur or in case of doubt, seek medical attention. In case of unconsciousness, do not administer anything orally.

Position and transport in a stable side position.

After inhalation Seek medical treatment in case of complaints.

After skin contact

Wash immediately with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

After eye contact

Rinse opened eye for several minutes under running water.

Seek immediate medical advice.

After swallowing

Rinse out mouth and then drink plenty of water.

Do not induce vomiting; call for medical help immediately.

(Contd. on page 3)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

Trade name **Epoxy Conductive, Comp. A**

(Contd. of page 2)

4.2 Most important symptoms and effects, both acute and delayed Damages cornea and eye lids.**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**

Water

Fire-extinguishing powder

Foam

5.2 Special hazards arising from the substance or mixture

May be released in case of fire

Nitrous gases

5.3 Advice for firefighters**Protective equipment:** Wear self-contained breathing apparatus.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation

Wear protective equipment. Keep unprotected persons away.

6.2 Environmental precautions:

Do not allow to enter the ground/soil.

Dilute with plenty of 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 of contaminated material as waste according to item 13.

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.

*

SECTION 7: Handling and storage

7.1 Precautions for safe handling Use only in well ventilated areas.**Information about protection against explosions and fires:** No special requirements.**7.2 Conditions for safe storage, including any incompatibilities****Storage****Requirements to be met by storerooms and containers:** No special requirements.**Information on storage in a common storage facility:**

Suitable material for containers and pipes: Light metals and their alloys.

Further information about storage conditions:

Store container in a well ventilated position.

Protect from frost.

Keep container tightly closed.

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

SECTION 8: Exposure controls/personal protection

8.1 Control parameters**Components with limit values that require monitoring at the workplace:****CAS: 111-76-2 2-butoxyethanol**

WEL	Short-term value: 246 mg/m ³ , 50 ppm
	Long-term value: 123 mg/m ³ , 25 ppm
	Sk, BMGV

CAS: 111-40-0 2,2'-iminodiethylamine

WEL	Long-term value: 4.3 mg/m ³ , 1 ppm
	Sk

(Contd. on page 4)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

Trade name **Epoxy Conductive, Comp. A**

(Contd. of page 3)

Ingredients with biological limit values:	
CAS: 111-76-2 2-butoxyethanol	
BMGV	240 mmol/mol creatinine Medium: urine Sampling time: post shift Parameter: butoxyacetic acid

Additional information: The lists that were valid during compilation were used as a basis.

8.2 Exposure controls

Appropriate engineering controls No further data; see item 7.

Individual protection measures, such as personal protective equipment

General protective and hygienic measures

Do not eat, drink or smoke while working.

Use skin protection cream for preventive skin protection.

Keep away from food, beverages and animal feed.

Immediately remove soiled, saturated clothing.

Wash hands before pauses and after work.

Avoid contact with eyes and skin.

The following indication regarding the personal protective equipment are to be considered as suggestions. The selection of the necessary personal protective equipment is to be evaluated by the employer depending on the types of operations and the local circumstances. If a risk assessment on-site shows that there is no risk for employees, the personal protective equipment is not required or the amount of the PPE can be adapted accordingly.

Respiratory equipment:

Filter A (brown)

Only use ambient air independent respiratory equipment in pits, shafts and silos!

Hand protection

Solvent resistant gloves

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

Nitrile rubber, NBR

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.

Penetration time of glove material

The determined penetration times according to EN 16523-1:2015 are not performed under practical conditions. Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

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

Eye/face protection Tightly sealed safety glasses.

Body protection: Protective work clothing.

* SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

Colour:	Different, according to dye
Odour:	Characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	>100 °C
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	1.1 Vol %
Upper:	10.6 Vol %

(Contd. on page 5)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

Trade name **Epoxy Conductive, Comp. A**

(Contd. of page 4)

Flash point:	>100 °C
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity	Not determined.
dynamic at 20 °C:	400 mPas
Solubility	
Water:	Fully miscible
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure at 20 °C:	23 hPa
Density and/or relative density	
Density at 20 °C:	1.2 g/cm ³
Relative density	Not determined.
Vapour density	Not determined.
9.2 Other information	
Appearance:	
Form:	Fluid
Important information on protection of health and environment, and on safety.	
Ignition temperature:	not applicable
Explosive properties:	Product is not explosive.
Solvent separation test	< 3 %
VOC EU	
Solid content:	46.6 %
Change in condition	
Evaporation rate	Not determined.
Information with regard to physical hazard	
classes	
Explosives	Void
Flammable gases	Void
Aerosols	Void
Oxidising gases	Void
Gases under pressure	Void
Flammable liquids	Void
Flammable solids	Void
Self-reactive substances and mixtures	Void
Pyrophoric liquids	Void
Pyrophoric solids	Void
Self-heating substances and mixtures	Void
Substances and mixtures, which emit flammable gases in contact with water	Void
Oxidising liquids	Void
Oxidising solids	Void
Organic peroxides	Void
Corrosive to metals	Void
Desensitised explosives	Void

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 handled and stored according to specifications.

Avoid: heat, flames, sparks

10.3 Possibility of hazardous reactions Exothermic reaction with acids**10.4 Conditions to avoid** No further relevant information available.**10.5 Incompatible materials:** Acids**10.6 Hazardous decomposition products:**

May be released in fire:

(Contd. on page 6)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

Trade name **Epoxy Conductive, Comp. A**

(Contd. of page 5)

Nitrous vitriol gases

SECTION 11: Toxicological information

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

Acute toxicity: Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:

ATE (Acute Toxicity Estimates)

Oral	LD50	15003 mg/kg (rat)
Dermal	LD50	20274 mg/kg (rabbit)
Inhalative	LC50/4 h	80.9 mg/l

Skin corrosion/irritation:

Causes skin irritation.

Serious eye damage/irritation:

Causes serious eye damage.

Sensitisation: Based on available data, the classification criteria are not met.**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.

11.2 Information on other hazards

Endocrine disrupting properties

None of the ingredients is listed.

SECTION 12: Ecological information

12.1 Toxicity

Aquatic toxicity: No further relevant information available.**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.

12.5 Results of PBT and vPvB assessment

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

12.6 Endocrine disrupting properties

For information on endocrine disrupting properties see section 11.

12.7 Other adverse effects

Additional ecological information:

General notes:

Do not allow undiluted or non-neutralised product to reach the sewage system or receiving waters.

Do not allow product to reach ground water, bodies of water or sewage system.

SECTION 13: Disposal considerations

Recommendation

Not hardened material must be disposed of as hazardous waste according to official regulations.

Hardened product remains may be disposed of as building rubble or put into household garbage.

The given refuse codes are recommendations based upon the intended use of the product. Because of special use and disposal conditions at the user's, other codes may apply under other conditions.

European waste catalogue

08 01 11*	waste paint and varnish containing organic solvents or other hazardous substances
-----------	---

Uncleaned packaging:

Recommendation: Disposal must be made according to official regulations.**Recommended cleaning agent:** Water, if necessary with cleaning agent.

(Contd. on page 7)

Safety data sheet

according to 1907/2006/EC, Article 31

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

Trade name **Epoxy Conductive, Comp. A**

(Contd. of page 6)

SECTION 14: Transport information

14.1 UN number or ID number ADR, ADN, IMDG, IATA	Void
14.2 UN proper shipping name ADR, ADN, IMDG, IATA	Void
14.3 Transport hazard class(es) ADR, ADN, IMDG, IATA Class	Void
14.4 Packing group ADR, IMDG, IATA	Void
14.5 Environmental hazards: Marine pollutant:	No
14.6 Special precautions for user	Not applicable.
14.7 Maritime transport in bulk according to IMO instruments	Not applicable.
Transport/Additional information:	Not a hazardous good according to the above regulations.
UN "Model Regulation":	Void

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

Information on employment restrictions:

Employment restrictions concerning young persons must be observed.

Employment restrictions concerning pregnant and nursing women must be observed.

15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Delivery specifications are found in the respective Technical Information Sheets.

This data is based on our present state of knowledge. However, it does not constitute a guarantee for any specific product features and does 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.

H315 Causes skin irritation.

H317 May cause an allergic skin reaction.

H318 Causes serious eye damage.

H319 Causes serious eye irritation.

H330 Fatal if inhaled.

H332 Harmful if inhaled.

H335 May cause respiratory irritation.

H400 Very toxic to aquatic life.

H410 Very toxic to aquatic life with long lasting effects.

H411 Toxic to aquatic life with long lasting effects.

Department issuing data specification sheet: Product Safety department / EHS

Version number of previous version: 3

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)

(Contd. on page 8)

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

Printing date 11.10.2021

Version number 4

Revision: 11.11.2019

Trade name Epoxy Conductive, Comp. A

(Contd. of page 7)

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)

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

Skin Irrit. 2: Skin corrosion/irritation – Category 2

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

Eye Irrit. 2: Serious eye damage/eye irritation – Category 2

Skin Sens. 1: Skin sensitisation – Category 1

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 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2