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

Printing date 11.10.2021 Version number 6 Revision: 09.04.2020

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

1.1 Product identifier
Trade name Epoxy BS 2000 Komp. B

Article number: 6001-6010

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 Löningen / 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

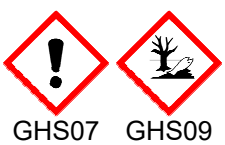
24h-Transport Emergency Contact Phone Number:
within USA and Canada: 1-800-424-9300
outside USA and Canada: 001-703-527-3887

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 Irrit. 2	H319 Causes serious eye irritation.
Skin Sens. 1	H317 May cause an allergic skin reaction.
Aquatic Chronic 2	H411 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



GHS07 GHS09

Signal word Warning

Hazard-determining components of labelling:
reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)
1,6-Bis(2,3-epoxypropoxy)hexan
bisphenol F-(epichlorhydrin); epoxy resin(number average molecular weight<700)

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maleic anhydride
Fatty acids, C14-18 and C16-18-unsatd., maleated

Hazard statements
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H317 May cause an allergic skin reaction.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves / eye protection / face protection.
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P333+P313	If skin irritation or rash occurs: Get medical advice/attention.
P337+P313	If eye irritation persists: Get medical advice/attention.
P391	Collect spillage.
P501	Dispose of contents/container in accordance with local/regional/national/ international regulations.

Additional information:
EUH205 Contains epoxy constituents. May produce an allergic reaction.

2.3 Other hazards
The residual content of epichlorhydrin corresponds to APME recommendations: modified resins < 10 ppm (0.001%)

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: 25068-38-6 NLP: 500-033-5 Index number: 603-074-00-8 Reg.nr.: 01-2119456619-26-XXXX	reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700) Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317, EUH205 Specific concentration limits: Skin Irrit. 2; H315: C ≥ 5 % Eye Irrit. 2; H319: C ≥ 5 %	≥40-<60%
CAS: 16096-31-4 EINECS: 240-260-4 Reg.nr.: 01-2119463471-41-XXXX	1,6-Bis(2,3-epoxypropoxy)hexan Skin Irrit. 2, H315; Eye Irrit. 2, H319; Skin Sens. 1, H317; Aquatic Chronic 3, H412	≥10-<20%
CAS: 28064-14-4 NLP: 500-006-8 Reg.nr.: 01-2119454392-40-XXXX	bisphenol F-(epichlorhydrin); epoxy resin(number average molecular weight<700) Aquatic Chronic 2, H411; Skin Irrit. 2, H315; Skin Sens. 1, H317	≥10-<20%
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%

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CAS: 85711-46-2 EINECS: 288-306-2 Reg.nr.: 01-2119976378-19-XXXX	Fatty acids, C14-18 and C16-18-unsatd., maleated Skin Irrit. 2, H315; Skin Sens. 1, H317	≥0.1-≤0.5%
CAS: 108-31-6 EINECS: 203-571-6 Index number: 607-096-00-9 Reg.nr.: 01-2119472428-31-XXXX	maleic anhydride Resp. Sens. 1, H334; STOT RE 1, H372; Skin Corr. 1B, H314; Acute Tox. 4, H302; Skin Sens. 1A, H317, EUH071 Specific concentration limit: Skin Sens. 1A; H317: C ≥ 0.001 %	≥0.001-<0.1%

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 When symptoms occur or in case of doubt, seek medical advice
After inhalation
Take affected persons into the open air and position comfortably
Supply fresh air and call for doctor for safety reasons.
In case of unconsciousness bring patient into stable side position for transport.
After skin contact
If skin irritation continues, consult a doctor.
Wash immediately with water and soap and rinse thoroughly.
After eye contact
Rinse opened eye for several minutes under running water. If symptoms persist, consult doctor.
After swallowing Seek immediate medical advice.
4.2 Most important symptoms and effects, both acute and delayed
In case of prolonged/repeated exposure or in high concentrations:
Headache
nausea
Gastro-intestinal symptoms
4.3 Indication of any immediate medical attention and special treatment needed
symptomatic treatment

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents Use fire fighting measures that suit the environment.
5.2 Special hazards arising from the substance or mixture
May be released in case of fire
Carbon monoxide (CO)
Under certain fire conditions, traces of other toxic gases cannot be excluded, e.g.:
Hydrogen chloride (HCl)
5.3 Advice for firefighters
Protective equipment:
Wear self-contained breathing apparatus.
Wear full protective suit.
Additional information
Cool endangered containers with water spray jet.
Collect contaminated fire fighting water separately. It must not enter drains.
Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
6.2 Environmental precautions:
Do not allow to enter the ground/soil.
Do not allow product to reach sewage system or water bodies.
Inform responsible authorities in case product reaches bodies of water or sewage system.
6.3 Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to item 13.

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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 information on disposal.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Avoid contact with skin and eyes.
Use only in well ventilated areas.
Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
Ensure good ventilation/exhaust in workplaces.
Avoid the formation of aerosols.

7.2 Conditions for safe storage, including any incompatibilities
Storage
Requirements to be met by storerooms and containers: Prevent any penetration into the ground.
Information on storage in a common storage facility: none
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/m³, 50 ppm Long-term value: 123 mg/m³, 25 ppm Sk, BMGV
CAS: 108-31-6 maleic anhydride	
WEL	Short-term value: 3 mg/m³ Long-term value: 1 mg/m³ Sen

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 evalutated 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 euiqment is not required or the amount of the PPE can be adpated accordingly.
Respiratory equipment:
Filter A (brown)

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Only use ambient air independent respiratory equipment in pits, shafts and silos!
In case of brief exposure or low pollution load, use respiratory protection equipment with filter. In case of intensive or longer exposure, use self-contained respiratory protection equipment.

Hand protection
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 trough 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: Closed work clothing

*
SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties	
General Information	
Colour:	Yellowish
Odour:	Weak, characteristic
Odour threshold:	Not determined.
Melting point/freezing point:	Not determined
Boiling point or initial boiling point and boiling range	Not determined
Flammability	Not applicable.
Lower and upper explosion limit	
Lower:	1.1 Vol %
Upper:	10.6 Vol %
Flash point:	>105 °C
Decomposition temperature:	Not determined.
pH	Not determined.
Viscosity:	
Kinematic viscosity	Not determined.
dynamic at 20 °C:	230 mPas
Solubility	
Water:	Not miscible or difficult to mix
Partition coefficient n-octanol/water (log value)	Not determined.
Vapour pressure:	Not determined.
Density and/or relative density	
Density at 20 °C:	1.12 g/cm³
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 %
Organic solvents:	9.5 %

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VOC EU	
Solid content:	85.8 %
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
May produce violent reactions with bases and numerous organic substances including alcohols and amines
Exothermic polymerisation
Possible formation of peroxide
10.4 Conditions to avoid No further relevant information available.
10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: Irritating gases/vapours

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:		
CAS: 25068-38-6 reaction product: bisphenol-A-(epichlorhydrin); epoxy resin (number average molecular weight ≤ 700)		
Oral	LD50	>10,000 mg/kg (rat)
Dermal	LD50	>2,000 mg/kg (rat)
CAS: 16096-31-4 1,6-Bis(2,3-epoxypropoxy)hexan		
Oral	LD50	2,900 mg/kg (rat)
Dermal	LD50	>4,900 mg/kg (rat)

Skin corrosion/irritation:
Causes skin irritation.
Serious eye damage/irritation:
Causes serious eye irritation.
Sensitisation:
May cause an allergic skin reaction.

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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.
Experience with humans:
Frequent or longer lasting skin contact may degrease and dry out skin which may lead to skin irritation and inflammation (dermatitis).
Additional toxicological information:
2-butoxyethanol has an irritating effect on respiratory organs at concentrations above the TLV value.
Special characteristics: 2-butoxyethanol has a narcotic effect in higher concentrations and may lead to blood and kidney damage (haemolysis). Light absorbability through skin.
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
Remark: Toxic for fish
Additional ecological information:
General notes:
Do not allow product to reach ground water, bodies of water or sewage system.
Hazardous to drinking water even if small quantities leak into soil.
Also toxic for fish and plankton in bodies of water.
Toxic for aquatic organisms

SECTION 13: Disposal considerations

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.
Packaging can be reused or recycled after cleaning.

*
SECTION 14: Transport information

14.1 UN number or ID number	
ADR, IMDG, IATA	UN3082
14.2 UN proper shipping name	
ADR	3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin (reaction product: bisphenol A-(epichlorhydrin) (number average molecular weight ≤ 700)))

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IMDG	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin (reaction product: bisphenol A-(epichlorhydrin) (number average molecular weight ≤ 700))), MARINE POLLUTANT
IATA	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (Epoxy Resin (reaction product: bisphenol A-(epichlorhydrin) (number average molecular weight ≤ 700)))

14.3 Transport hazard class(es)

ADR

Class	9 (M6) Miscellaneous hazardous substances and articles.
Label	9

IMDG, IATA

Class	9 Miscellaneous hazardous substances and articles.
Label	9

14.4 Packing group

ADR, IMDG, IATA	III

14.5 Environmental hazards:	Product contains environmentally hazardous substances: Epoxy Resin (reaction product: bisphenol A-(epichlorhydrin) (number average molecular weight ≤ 700))
Marine pollutant:	Yes Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
Special marking (IATA):	Symbol (fish and tree)

14.6 Special precautions for user	Warning: Miscellaneous hazardous substances and articles.
hazard identification number:	90
EMS Number:	F-A,S-F
Stowage Category	A

14.7 Maritime transport in bulk according to IMO instruments	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	-

IMDG

Limited quantities (LQ)	5L

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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 3082 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (EPOXY RESIN (REACTION PRODUCT: BISPHENOL A-(EPICHLORHYDRIN) (NUMBER AVERAGE MOLECULAR WEIGHT ≤ 700))), 9, 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 E2 Hazardous to the Aquatic Environment
Qualifying quantity (tonnes) for the application of lower-tier requirements 200 t
Qualifying quantity (tonnes) for the application of upper-tier requirements 500 t
REGULATION (EC) No 1907/2006 ANNEX XVII Conditions of restriction: 3
National regulations
Other regulations, limitations and prohibition ordinances
APME document: "Epoxy resins and curing agents: Toxicology, working safety, environment."
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.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H372 Causes damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.
H412 Harmful to aquatic life with long lasting effects.
EUH071 Corrosive to the respiratory tract.
EUH205 Contains epoxy constituents. May produce an allergic reaction.
Classification according to Regulation (EC) No 1272/2008 Calculation method

Department issuing data specification sheet: Product Safety department / EHS
Version number of previous version: 5
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)
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
Skin Irrit. 2: Skin corrosion/irritation – Category 2
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2
Resp. Sens. 1: Respiratory sensitisation – Category 1

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Skin Sens. 1: Skin sensitisation – Category 1
Skin Sens. 1A: Skin sensitisation – Category 1A
STOT RE 1: Specific target organ toxicity (repeated exposure) – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3