

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2009

Revision: 05.09.2008

1 Identification of substance

- **Product details**
- Trade name **Epoxy FAS 100, Komp. B**
- **Article number:** 0916
- **Application of the substance / the preparation** Coating
- **Manufacturer/Supplier:**
Remmers Baustofftechnik GmbH
Postfach 1255
D-49624 Lönningen / Germany
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Fax: 05432/3985
- **Informing department:**
Product Safety department: Tel.: +49 (0)5432/83-138/-538
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during working hours:
U.K.: Tel.: +44 (0) 845 373 0103
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after working hours: Tel.: +49 (0)171/6428-297

2 Hazards identification

- **Hazard designation:**



C Corrosive

- **Information pertaining to particular dangers for man and environment**
R 20/22 Harmful by inhalation and if swallowed.
R 34 Causes burns.
R 42/43 May cause sensitisation by inhalation and skin contact.
- **Classification system**
The classification is in line with current EC lists. It is expanded, however, by information from technical literature and by information furnished by supplier companies.

3 Composition/information on ingredients

- **Chemical characterization**
- **Description:** Epoxy resin hardener, formulation based on aliphatic polyamines

- **Dangerous components:**

CAS: 100-51-6 EINECS: 202-859-9	Benzyl alcohol	Xn; R 20/22	20-40%
CAS: 1477-55-0 EINECS: 216-032-5	m-phenylenebis(methylamine)	C, Xn; R 22-34	10-20%
CAS: 98-54-4 EINECS: 202-679-0	4-tert-butylphenol	Xn, Xi; R 36/37/38-42/43	5-10%

(Contd. on page 2)

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2009

Revision: 05.09.2008

Trade name Epoxy FAS 100, Komp. B

(Contd. of page 1)

CAS: 109-55-7 EINECS: 203-680-9	3-aminopropyldimethylamine	C, Xn; R 10-22-34-43	5-10%
CAS: 90-72-2 EINECS: 202-013-9	2,4,6-tris(dimethylaminomethyl)phenol	Xn, Xi; R 22-36/38	5-10%
CAS: 80-05-7 EINECS: 201-245-8	bisphenol A	Xn, Xi; R 37-41-43-62-52	2.5-5%
CAS: 25620-58-0 EINECS: 247-134-8	trimethylhexane-1,6-diamine	C, Xn; R 22-34-43-52/53	1-2.5%

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

4 First aid measures

· **General information**

Immediately remove any clothing soiled by the product.

In case of irregular breathing or respiratory arrest, provide artificial respiration.

· **After inhalation**

Take affected persons into the open air and position comfortably

In case of respiratory tract or mucous membrane irritation (e.g. tussive irritation), if you feel unwell or prolonged exposure, seek medical attention.

· **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.

· **After swallowing**

Drink plenty of water and provide fresh air. Call a doctor immediately.

Do not induce vomiting; call for medical help immediately.

· **Information for doctor**

· **The following symptoms may occur:**

In case of prolonged/repeated exposure or in high concentrations:

Coughing

Dazed

Respiratory distressn (dyspnoea)

Gastro-intestinal symptoms

nausea

· **Treatment** symptomatic treatment

5 Fire fighting measures

· **Suitable extinguishing agents**

CO₂, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

· **Special hazards caused by the material, its products of combustion or flue gases:**

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

May be released in case of fire

Carbon monoxide (CO)

Carbon dioxide

carbon monoxides

Phenol

aromatic hydrocarbons

further harmful conflagration gases and fumes

· **Protective equipment:**

Wear self-contained breathing apparatus.

Wear full protective suit.

· **Additional information**

Cool endangered containers with water spray jet.

(Contd. on page 3)

Trade name Epoxy FAS 100, Komp. B

(Contd. of page 2)

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.

6 Accidental release measures

· **Person-related safety precautions:**

Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation

· **Measures for environmental protection:**

Do not allow product to reach sewage system or water bodies.
Do not allow to enter the ground/soil.

· **Measures for cleaning/collecting:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose of contaminated material as waste according to item 13.
Ensure adequate ventilation.

7 Handling and storage

· **Handling**

· **Information for safe handling:**

Use only in well ventilated areas.
Open and handle container with care.

· **Information about protection against explosions and fires:** No special requirements.

· **Storage**

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

Store only in unopened original containers.
Prevent any penetration into the ground.

· **Information on storage in a common storage facility:**

Store away from oxidizing agents.
Store away from food.

· **Further information about storage conditions:**

Store cool and dry in tightly closed containers.
Store container in a well ventilated position.
Protect from heat and direct sunlight.
Protect from frost.

8 Exposure controls and personal protection

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

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

The product does not contain any relevant quantities of materials with limit values that have to be monitored at the workplace.

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

· **Personal protective equipment**

· **General protective and hygienic measures**

Immediately remove soiled, saturated clothing.
Store protective clothing separately.
Keep away from food, beverages and animal feed.
Do not eat, drink or smoke while working.
Use skin protection cream for preventive skin protection.
Wash hands before pauses and after work.
Avoid contact with eyes and skin.
Do not inhale gases / vapours / aerosols.

(Contd. on page 4)

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2009

Revision: 05.09.2008

Trade name **Epoxy FAS 100, Komp. B**

(Contd. of page 3)

- **Respiratory equipment:**
Filter A/P2.
Only use ambient air independent respiratory equipment in pits, shafts and silos!
- **Protection of hands:** Long cuffed gloves
- **Material of gloves:** Nitrile rubber, NBR
- **Penetration time of glove material**
Break through time: max. 240 min (DIN EN 374).
The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.
- **Eye protection:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

9 Physical and chemical properties:

· General Information

Form:	Fluid
Colour:	Yellowish
Odour:	Amine-like

· Change in condition

Melting point/Melting range:	Not determined
Boiling point/Boiling range:	Not determined

· **Flash point:** > 100°C (Setaflash)

· **Ignition temperature:** 435°C

· **Self-inflammability:** Product is not self-igniting.

· **Danger of explosion:** Product is not explosive.

· **Vapour pressure at 20°C:** 0.1 hPa

· **Density at 20°C** 1.030 g/cm³

· Solubility in / Miscibility with

Water: Insoluble

· Viscosity:

dynamic at 20°C: 1000 mPas

10 Stability and reactivity

- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
No decomposition if handled and stored according to specifications.
- **Materials to be avoided:** Strong oxidising agents
- **Dangerous decomposition products:**
None if used properly.
None if stored properly.

11 Toxicological information

· Acute toxicity:

· LD/LC50 values that are relevant for classification:

100-51-6 Benzyl alcohol

Oral	LD50	1230 mg/kg (Ratte)
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(Contd. on page 5)

GB

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2009

Revision: 05.09.2008

Trade name **Epoxy FAS 100, Komp. B**

(Contd. of page 4)

Dermal	LD50	2000 mg/kg (Kaninchen)
1477-55-0 m-phenylenebis(methylamine)		
Oral	LD50	1040 mg/kg (Ratte)
Inhalative	LC50/4 h	2.4 mg/l (Ratte)
98-54-4 4-tert-butylphenol		
Oral	LD50	2951 mg/kg (Ratte)
Dermal	LD50	2288 mg/kg (Kaninchen)
109-55-7 3-aminopropyldimethylamine		
Oral	LD50	1870 mg/kg (Ratte)
Dermal	LD50	490 mg/kg (Kaninchen)
80-05-7 bisphenol A		
Oral	LD50	3250 mg/kg (Ratte)
Dermal	LD50	3000 mg/kg (Kaninchen)
25620-58-0 trimethylhexane-1,6-diamine		
Oral	LD50	910 mg/kg (Ratte)

- **Primary irritant effect:**

- **on the skin:** Caustic effect on skin and mucous membranes.

- **on the eye:** Strong caustic effect.

- **Sensitisation:** Sensitisation possible by skin contact.

- **Additional toxicological information:**

The product shows the following dangers based on the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Harmful

Corrosive

Irritant

Swallowing leads to a strong caustic effect in the mouth and throat and to the danger of perforation of oesophagus and stomach.

- **Sensitisation** May cause sensitisation by inhalation and skin contact.

12 Ecological information:

- **General notes:**

Water hazard class 2 : hazardous to water.

Do not allow product to reach ground water, bodies of water or sewage system, even in small quantities. according to appendix 4 VwVwS

13 Notes on disposal:

- **Product:**

- **Recommendation**

Do not dispose of together with household garbage. Do not allow product to reach sewage system.

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 00 00	WASTES FROM THE MANUFACTURE, FORMULATION, SUPPLY AND USE (MFSU) OF COATINGS (PAINTS, VARNISHES AND VITREOUS ENAMELS), ADHESIVES, SEALANTS AND PRINTING INKS
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08 01 00	wastes from MFSU and removal of paint and varnish
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(Contd. on page 6)

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

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Revision: 05.09.2008

Trade name **Epoxy FAS 100, Komp. B**

(Contd. of page 5)

08 01 11	waste paint and varnish containing organic solvents or other dangerous substances
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 28	paint, inks, adhesives and resins other than those mentioned in 20 01 27

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

14 Transport information

- Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)



- **ADR/RID-GGVS/E Class:** 8 (C9) Corrosive substances.
- **Kemler Number:** 80
- **UN-Number:** 1760
- **Packaging group:** III
- **Danger sign:** 8
- **Designation of goods:** 1760 CORROSIVE LIQUID, N.O.S. (m-phenylenebis(methylamine))
- **Limited quantities (LQ)** LQ7
- **Tunnel restriction code** E
- **Remarks:** TREM-Card No. 83

- Maritime transport IMDG/GGVSea:



- **IMDG/GGVSea Class:** 8
- **UN Number:** 1760
- **Label** 8
- **Packaging group:** III
- **EMS Number:** F-A,S-B
- **Correct technical name:** CORROSIVE LIQUID, N.O.S. (m-phenylenebis(methylamine))

- Air transport ICAO-TI and IATA-DGR:



- **ICAO/IATA Class:** 8
- **UN/ID Number:** 1760
- **Label** 8
- **Packaging group:** III
- **Correct technical name:** CORROSIVE LIQUID, N.O.S. (m-phenylenebis(methylamine))

GB

(Contd. on page 7)

Trade name Epoxy FAS 100, Komp. B

(Contd. of page 6)

15 Regulatory information

- **Designation according to EC guidelines:**

The product has been classified and labelled in accordance with EC Guidelines / Ordinance on Hazardous Materials (GefStoffV)

- **Code letter and hazard designation of product:**



C Corrosive

- **Hazard-determining components of labelling:**

Benzyl alcohol
4-tert-butylphenol
3-aminopropyldimethylamine
bisphenol A
trimethylhexane-1,6-diamine
m-phenylenebis(methylamine)

- **Risk phrases:**

20/22 Harmful by inhalation and if swallowed.
34 Causes burns.
42/43 May cause sensitisation by inhalation and skin contact.

- **Safety phrases:**

23 Do not breathe fumes/aerosol.
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
28 After contact with skin, wash immediately with plenty of water.
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.
45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

- **Product Code:** RE 1

- **National regulations**

- **Water hazard class:**

German Water hazard class 2: hazardous to water.
according to appendix 4 VwVwS

- **Other regulations, limitations and prohibition ordinances**

APME document: "Epoxy resins and hardener: Toxicology, working safety, environment."

- **Professional Association (BG) Code of Practice:**

BGR 227 - "Epoxy Resins"
M 004 "Irritating substances/corrosive substances"

16 Other information:

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. Delivery specifications are found in the respective Technical Information Sheets.

- **Relevant R-phrases**

10 Flammable.
20/22 Harmful by inhalation and if swallowed.
22 Harmful if swallowed.
34 Causes burns.
36/37/38 Irritating to eyes, respiratory system and skin.
36/38 Irritating to eyes and skin.
37 Irritating to respiratory system.
41 Risk of serious damage to eyes.
42/43 May cause sensitisation by inhalation and skin contact.

(Contd. on page 8)

Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 28.01.2009

Revision: 05.09.2008

Trade name Epoxy FAS 100, Komp. B

(Contd. of page 7)

43 May cause sensitisation by skin contact.

52 Harmful to aquatic organisms.

52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

62 Possible risk of impaired fertility.

· **Department issuing data specification sheet:** Product Safety department

GB