

## Material Safety Data Sheet

according to 1907/2006/EC, Article 31

Printing date 08.08.2007

Revision: 07.12.2006

### 1 Identification of substance

- **Product details**
- **Trade name** **Rust Inhibitor EP 2 K, Component B**  
**Funcosil Epoxy Rust Inhibitor, Component B**
- **Article number:** 0920
- **Application of the substance / the preparation** Anticorrosion additive
- **Manufacturer/Supplier:**  
Remmers Baustofftechnik GmbH  
Postfach 1255  
D-49624 Lönningen / Germany  
Tel.: 05432/83-0  
Fax: 05432/3985
- **Informing department:**  
Product Safety department: Tel.: +49 (0)5432/83-138/-538  
E-Mail: sales@remmers.co.uk
- **Emergency information:**  
during working hours:  
U.K.: Tel.: +44 (0) 845 373 0103  
Far East: Tel.: +65( 0) 67410277  
Head Office Germany: Tel.: +49 (0)5432 83 185  
after working hours: Tel.: +49 (0)171/6428-297

### 2 Hazards identification

- **Hazard designation:**



Xn Harmful

- **Information pertaining to particular dangers for man and environment**

R 10 Flammable.  
R 20/21 Harmful by inhalation and in contact with skin.  
R 36/38 Irritating to eyes and skin.  
R 67 Vapours may cause drowsiness and dizziness.

- **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:** Epoxide resin hardener, solvent-based

- **Dangerous components:**

CAS: 1330-20-7 EINECS: 215-535-7	xylene, mixed isomers, pure	Xn, Xi; R 10-20/21-38	20-<40%
CAS: 107-98-2 EINECS: 203-539-1	1-methoxypropan-2-ol	R 10	20-<40%
CAS: 71-36-3 EINECS: 200-751-6	butan-1-ol	Xn, Xi; R 10-22-37/38-41-67	5-<10%

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· **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.

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

· **After inhalation**

Take affected persons into the open air and position comfortably

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

· **After skin contact**

Wash immediately with water and soap and rinse thoroughly.

Do not use solvents or thinners!

If skin irritation continues, consult a doctor.

· **After eye contact** Rinse opened eye for several minutes under running water. Then consult doctor.

· **After swallowing**

Do not induce vomiting; call for medical help immediately.

Allow to drink 0.5 - 0.8 l water, if possible with ground medicinal charcoal. In case of spontaneous vomiting, make sure that vomit can freely pass so that suffocation is prevented - stable side position. Allow to drink water again. Artificial induction of vomiting should only be carried out by trained rescue personnel.

Do not administer anything if the patient is unconscious or has convulsions. Call doctor immediately.

· **Information for doctor**

· **The following symptoms may occur:**

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

Headache

Dizziness

nausea

anaesthetic effect

Dry skin

Irritating effect on skin and eyes.

Irritating effect on respiratory organs.

· **Treatment**

symptomatic treatment

To avoid dermatitis (skin inflammation), use skin cream.

#### 5 Fire fighting measures

· **Suitable extinguishing agents**

Water spray jet

Carbon dioxide

Foam

Fire-extinguishing powder

· **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:**

May form explosive gas-air mixtures.

May be released in case of fire

Carbon monoxide (CO)

Carbon dioxide

carbon monoxides

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

further harmful conflagration gases and fumes

Vapours are heavier than air and spread out over the ground. Ignition over greater distances is possible.

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- **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.

## 6 Accidental release measures

- **Person-related safety precautions:**  
Wear protective equipment. Keep unprotected persons away.  
Ensure adequate ventilation  
Keep away from ignition sources
- **Measures for environmental protection:**  
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.  
Inform responsible authorities if the product penetrates into the ground.
- **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.  
Observe the usual precautionary measures for handling solvents.
- **Information about protection against explosions and fires:**  
Keep ignition sources away - Do not smoke.  
Protect against electrostatic charges.  
Fumes can combine with air to form an explosive mixture.
- **Storage**
- **Requirements to be met by storerooms and containers:**  
Ventilate storage and work rooms sufficiently.  
Install solvent resistant, sealed floor.  
Store in cool location.
- **Information on storage in a common storage facility:** Store away from food.
- **Further information about storage conditions:**  
Store cool and dry in tightly closed containers.  
Protect from heat and direct sunlight.  
Store container in a well ventilated position.  
Protect from frost.  
Do not smoke in storage areas. Storage temperature: room temperature.

## 8 Exposure controls and personal protection

- **Additional information about design of technical systems:** Use only in well-ventilated areas.

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

**1330-20-7 xylene, mixed isomers, pure**

MAK 440 mg/m<sup>3</sup>, 100 ml/m<sup>3</sup>

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**107-98-2 1-methoxypropan-2-ol**MAK 325 mg/m<sup>3</sup>, 100 ml/m<sup>3</sup>**71-36-3 butan-1-ol**MAK 300 mg/m<sup>3</sup>, 100 ml/m<sup>3</sup>

- **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.  
 Do not eat, drink or smoke while working.  
 Keep away from food, beverages and animal feed.  
 Apply solvent-resistant skin protection preparation before beginning work.  
 Wash hands before pauses and after work.  
 Avoid contact with eyes and skin.  
 Do not inhale gases / vapours / aerosols.
- **Respiratory equipment:**  
 Respiratory protection recommended.  
 Short term filter device:  
 Filter A (brown)
- **Protection of hands:** Long cuffed gloves
- **Material of gloves** Butyl rubber, BR
- **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:** Tightly sealed safety glasses.
- **Body protection:** Protective work clothing.

## 9 Physical and chemical properties:

- **General Information**

<b>Form:</b>	Fluid
<b>Colour:</b>	Yellow-brown
<b>Odour:</b>	Solvent-like

- **Change in condition**

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	ca. 120°C (1013 hPa)

- **Flash point:** ca. 25°C

- **Ignition temperature:** 340°C (DIN 51794)

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

- **Danger of explosion:** Product is not explosive. However, formation of dangerous explosive vapour/air mixtures is possible.

- **Explosive Limits:**

<b>Lower:</b>	1.5 Vol % solvent
<b>Upper:</b>	10.9 Vol % solvent

- **Vapour pressure at 20°C:** ca. 1200 Pa

- **Density at 20°C** ca. 1.0 g/cm<sup>3</sup>

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· <b>Solubility in / Miscibility with Water:</b>	Partially soluble
· <b>pH-value at 20°C:</b>	ca. 10 50% dispers.
· <b>Viscosity:</b>	
<b>dynamic at 20°C:</b>	3500 mPas
<b>kinematic at 20°C:</b>	672 s (DIN 53211/4)

## 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.  
Avoid: heat, flames, sparks
- **Materials to be avoided:** Strong acids, strong bases and strong oxidising agents.
- **Dangerous reactions**  
Reacts with strong oxidising agents  
Used empty containers may contain product gases which form explosive mixtures with air
- **Dangerous decomposition products:**  
None if used properly.  
None if stored properly.

## 11 Toxicological information

- **Acute toxicity:**

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

**1330-20-7 xylene, mixed isomers, pure**

Oral	LD50	8700 mg/kg (Ratte)
Dermal	LD50	2000 mg/kg (Kaninchen)
Inhalative	LC50/4 h	6350 mg/l (Ratte)

**107-98-2 1-methoxypropan-2-ol**

Oral	LD50	5000 mg/kg (Ratte)
Dermal	LD50	13500 mg/kg (Kaninchen)
Inhalative	LC50/4 h	6 mg/l (Ratte)

**71-36-3 butan-1-ol**

Oral	LD50	790 mg/kg (Ratte)
Dermal	LD50	3400 mg/kg (Kaninchen)
Inhalative	LC50/4 h	8000 mg/l (Ratte)

- **Primary irritant effect:**
- **on the skin:** Irritates skin and mucous membranes.
- **on the eye:** No irritating effect.
- **Sensitisation:** No sensitising effect known.
- **Experience with humans:**  
High concentrations may cause tiredness and dizziness.  
By inhalation:  
In a high concentration irritation of mucous membranes and possible narcotic effect.  
After prolonged contact: Irritation skin, eyes and mucous membranes.  
Frequent or longer lasting skin contact may degrease and dry out skin which may lead to skin irritation and inflammation (dermatitis).

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· **Additional toxicological information:**

Repeated and prolonged over-exposure may lead to damage of the central nervous system because of the xylene content. An addiction to xylene is possible.

## 12 Ecological information:

· **Information on elimination (persistence and degradability):**

· **Other information:**

Data for xylene:

Easily biodegradable. Resistibility under anaerobic conditions (estimated). Fast photochemical oxidation in the air. Half-time value in the environment: < 1 day (estimated). Ruling loss due to photolysis. Risk of decrease of oxygen in aquatic systems (estimated).

· **Behaviour in environmental systems:**

· **Mobility and bioaccumulation potential:**

Xylene floats on water.

It evaporates within one day from water or ground surfaces.

Dissolved material evaporates quickly. If xylene penetrates the ground, it remains mobile and can pollute ground water.

No essential bioaccumulation.

· **Ecotoxicological effects:**

· **Acquatic toxicity:**

· **Type of test Effective concentration Method Assessment**

Rainbow trout LC-50 (96 h) = 14 mg/l

Water flea, Daphnia magna LC-50 (48 h) = 86 mg/l

Ide (Leuciscus idus) EC-50 (24 h) = 165 mg/l

Green alga: Chlamydomonas angulosa EC-50 (3 h) = 46 mg/l

(Data applies to xylene)

· **Behaviour in sewage processing plants:**

· **Type of test Effective concentration Method Assessment**

Data for xylene:

Acute toxicity to bacteria:  $10 < LC/EC/IC-50 < 100$  mg/l slightly toxic

· **Remark:** Xylene is practically non-toxic for organisms in sewage treatment plants.

· **General notes:**

Water hazard class 2 : hazardous to water.

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

## 13 Notes on disposal:

· **Product:**

· **Recommendation**

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**

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 27	paint, inks, adhesives and resins containing dangerous substances

· **Uncleaned packaging:**

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

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## 14 Transport information

- Land transport ADR/RID and GGVS/GGVE (cross-border/domestic)
- ADR/RID-GGVS/E Class: -
- Remarks: In drums/vessels < 450 litre:  
Transport according to annotations 2.2.3.1.5 ADR because of high viscosity

- Maritime transport IMDG/GGVSea:
- IMDG/GGVSea Class: -
- Marine pollutant: -
- Remarks: In drums/vessels < 30 litres:  
Transport in accordance with paragraph 2.3.2.5 of the IMDG Code

- Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 3
- UN/ID Number: 1263
- Label: 3
- Packaging group: III
- Correct technical name: PAINT

## 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:



Xn Harmful

- Hazard-determining components of labelling:  
xylene, mixed isomers, pure  
butan-1-ol
- Risk phrases:  
10 Flammable.  
20/21 Harmful by inhalation and in contact with skin.  
36/38 Irritating to eyes and skin.  
67 Vapours may cause drowsiness and dizziness.
- Safety phrases:  
2 Keep out of the reach of children.  
23 Do not breathe fumes/aerosol.  
25 Avoid contact with eyes.  
36/37 Wear suitable protective clothing and gloves.  
46 If swallowed, seek medical advice immediately and show this container or label.  
51 Use only in well-ventilated areas.

- National regulations

- Technical instructions (air):

Class	Proportion in %
II	30,0
III	45,0

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**· Water hazard class:**

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:**

M 017 "Solvents"

BGR 227 - "Epoxy Resins"

M 023 "Polyester- und Epoxid-Harze"

M 017 "Lösemittel"

## 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.

20/21 Harmful by inhalation and in contact with skin.

22 Harmful if swallowed.

37/38 Irritating to respiratory system and skin.

38 Irritating to skin.

41 Risk of serious damage to eyes.

67 Vapours may cause drowsiness and dizziness.

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

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