

## 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 A**  
**Funcosil Epoxy Rust Inhibitor, Component A**
- **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 43 May cause sensitisation by skin contact.  
R 52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
Contains epoxy constituents. See information supplied by the manufacturer.
- **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 with pigments and filler, contains solvents

- **Dangerous components:**

CAS: 25068-38-6	reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number	20-<40%
NLP: 500-033-5	average molecular weight = 700)	
	Xi, N; R 36/38-43-51/53	

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CAS: 1330-20-7 EINECS: 215-535-7	xylene, mixed isomers, pure Xn, Xi; R 10-20/21-38	20-<40%
CAS: 108-10-1 EINECS: 203-550-1	4-methylpentan-2-one Xn, Xi, F; R 11-20-36/37-66	2.5-<5%
CAS: 7779-90-0 EINECS: 231-944-3	trizinc bis(orthophosphate) N; R 50/53	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.

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

### · After inhalation

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

Rinse out mouth and then drink plenty of water.

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:

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

CO<sub>2</sub>, 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:

May form explosive gas-air mixtures.

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)

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

### · Protective equipment:

Wear self-contained breathing apparatus.

Wear full protective suit.

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· **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.
- Keep away from ignition sources
- Ensure adequate ventilation

· **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.
- Store container in a well ventilated position.
- Protect from heat and direct sunlight.
- 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**

WEL	Short-term value: 441 mg/m <sup>3</sup> , 100 ppm
	Long-term value: 220 mg/m <sup>3</sup> , 50 ppm

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### 108-10-1 4-methylpentan-2-one

WEL	Short-term value: 416 mg/m <sup>3</sup> , 100 ppm Long-term value: 208 mg/m <sup>3</sup> , 50 ppm
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- **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>	Viscous
<b>Colour:</b>	Red-brown
<b>Odour:</b>	Aromatic

### · Change in condition

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

· **Flash point:** 28°C (Setaflash 100 ml/)

· **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>	1.0 Vol %
<b>Upper:</b>	7.0 Vol %

· **Vapour pressure at 20°C:** ca. 8 mbar

· **Density at 20°C** 1.35 g/cm<sup>3</sup>

### · Solubility in / Miscibility with

**Water:** Insoluble

### · Viscosity:

**dynamic at 23°C:** ca. 2500 mPas

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<b>kinematic at 20°C:</b>	330 s (DIN 53211/4 100 ml/)
	bei 23 ° C 222 s DIN 53211/6

## 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 oxidising agents
- **Dangerous reactions**  
 Reacts with strong oxidising agents  
 Forms explosive gas mixture with air  
 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:**

**25068-38-6 reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)**

Oral	LD50	> 10000 mg/kg (Ratte)
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Dermal	LD50	> 2000 mg/kg (Ratte)
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**1309-37-1 diiron trioxide**

Oral	LD50	>5000 mg/kg (Ratte)
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**1330-20-7 xylene, mixed isomers, pure**

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

- **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.

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

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## 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.
- **Ecotoxic 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: Chlamyd. 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.

## 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:** -

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- **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:**  
reaction product: bisphenol-A-(epichlorhydrin) epoxy resin (number average molecular weight = 700)  
xylene, mixed isomers, pure
- **Risk phrases:**  
10 Flammable.  
20/21 Harmful by inhalation and in contact with skin.  
36/38 Irritating to eyes and skin.  
43 May cause sensitisation by skin contact.  
52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
- **Safety phrases:**  
2 Keep out of the reach of children.  
23 Do not breathe fumes/aerosol.  
24 Avoid contact with skin.  
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 soap and water.  
46 If swallowed, seek medical advice immediately and show this container or label.
- **Special labelling of certain preparations:**  
Contains epoxy constituents. See information supplied by the manufacturer.
- **Product Code:** RE 2.5
- **National regulations**
- **Technical instructions (air):**

Class	Proportion in %
NK	20-<40

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

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· **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"

## 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.

11 Highly flammable.

20 Harmful by inhalation.

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

36/37 Irritating to eyes and respiratory system.

36/38 Irritating to eyes and skin.

38 Irritating to skin.

43 May cause sensitisation by skin contact.

50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

66 Repeated exposure may cause skin dryness or cracking.

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

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