

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

Printing date 10.01.2015

Version number 3

Revision: 08.01.2015

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

· **1.1 Product identifier**

· **Trade name: RM 5001**

· **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**

Flocculant/ Flocculating agent

Water treatment

· **1.3 Details of the supplier of the safety data sheet**

· **Manufacturer/Supplier:**

Alfred Kärcher GmbH & Co. KG

Alfred-Kärcher-Str. 28-40

D - 71364 Winnenden

Postfach 160

D - 71349 Winnenden

Tel.: +49-7195-14-0

Fax : +49-7195-14-2212

[www.karcher.com](http://www.karcher.com)

· **Further information obtainable from:**

Department PDE-D

Tel.: +49-7195-14-2398

Fax : +49-7195-14-3164

[safetydata@karcher.com](mailto:safetydata@karcher.com)

· **1.4 Emergency telephone number:** Tel.: 0049 30 30686 790 Giftnotruf Berlin

**SECTION 2: Hazards identification**

· **2.1 Classification of the substance or mixture**

· **Classification according to Regulation (EC) No 1272/2008**

Met. Corr.1 H290 May be corrosive to metals.

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.

Acute Tox. 4 H302 Harmful if swallowed.

· **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**

C; Corrosive

R34: Causes burns.

Xn; Harmful

R22: Harmful if swallowed.

· **Information concerning particular hazards for human and environment:**

The product has to be labelled due to the calculation procedure of the "General Classification guideline for preparations of the EU" in the latest valid version.

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· **Classification system:**

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

· **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    GHS07

· **Signal word Danger**

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

Ferric (III) chloride sulfate

· **Hazard statements**

H290 May be corrosive to metals.  
H302 Harmful if swallowed.  
H314 Causes severe skin burns and eye damage.

· **Precautionary statements**

P280                      Wear protective gloves/protective clothing/eye protection/face protection.  
P305+P351+P338 **IF IN EYES:** Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310                      Immediately call a POISON CENTER/doctor.  
P303+P361+P353 **IF ON SKIN (or hair):** Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P405                      Store locked up.  
P501                      Dispose of contents/container in accordance with local/regional/national/international regulations.

· **2.3 Other hazards**

· **Results of PBT and vPvB assessment**





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

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

· **3.2 Chemical characterisation: Mixtures**

· **Description:** Mixture of substances listed below with non-hazardous additions.

· **Dangerous components:**

CAS: 12410-14-9	Ferric (III) chloride sulfate	25-50%
EINECS: 235-649-0	 C R34;  Xn R22	
Reg.nr.: 01-2119497988-06-xxxx	 Skin Corr. 1B, H314;  Acute Tox. 4, H302	

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

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\* **SECTION 4: First aid measures**

· **4.1 Description of first aid measures**

· **General information**

Involve doctor immediately.

Immediately remove any clothing soiled by the product.

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

· **After inhalation**

In case of unconsciousness place patient stably in side position for transportation.

Supply fresh air; consult doctor in case of complaints.

· **After skin contact** Immediately wash with water and soap and rinse thoroughly.

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

· **After swallowing**

Rinse out mouth and then drink plenty of water.

Call a doctor immediately.

Call for a doctor immediately.

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

If symptoms persist consult doctor.

· **4.2 Most important symptoms and effects, both acute and delayed**

Causes severe skin burns and eye damage.

· **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**

CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.

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

· **5.2 Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Hydrogen chloride (HCl)

Sulphur dioxide (SO<sub>2</sub>)

· **5.3 Advice for firefighters**

· **Protective equipment:**

Wear fully protective suit.

Wear self-contained respiratory protective device.

\* **SECTION 6: Accidental release measures**

· **6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

· **6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

Do not allow to penetrate the ground/soil.

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- **6.3 Methods and material for containment and cleaning up:**
  - Dilute with plenty water.*
  - Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders).*
  - Use neutralising agent.*
  - Dispose contaminated material as waste according to item 13.*
  - 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 disposal information.*

\* **SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling** *No special precautions are necessary if used correctly.*
- **Information about fire - and explosion protection:** *The product is not flammable*
- **7.2 Conditions for safe storage, including any incompatibilities**
- **Storage**
- **Requirements to be met by storerooms and receptacles:**
  - Store only in the original receptacle.*
  - Provide acid-resistant floor.*
- **Information about storage in one common storage facility:** *Not required.*
- **Further information about storage conditions:**
  - Storage in a collecting room is required.*
  - Keep receptacle tightly sealed.*
- **Storage class** *VCI-storage class: 8B - not flammable corrosive substances*
- **7.3 Specific end use(s)** *No further relevant information available.*

\* **SECTION 8: Exposure controls/personal protection**

- **Additional information about design of technical facilities:** *No further data; see item 7.*
- **8.1 Control parameters**
- **Ingredients with limit values that require monitoring at the workplace:**
  - The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.*
- **8.2 Exposure controls**
- **Personal protective equipment**
- **General protective and hygienic measures**
  - Keep away from foodstuffs, beverages and feed.*
  - Immediately remove all soiled and contaminated clothing*
  - Wash hands before breaks and at the end of work.*
  - Avoid contact with the eyes and skin.*
- **Respiratory protection:**
  - Not necessary if room is well-ventilated.*
  - EN 149: FFP2*

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- **Protection of hands:**  
Gloves of NBR, Viton



Protective gloves.

- **Material of gloves**

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

- **For the permanent contact in work areas without heightened risk of injury (e.g. Laboratory) gloves made of the following material are suitable:**

\* butyl rubber 0,7 mm, 480 min

- **As protection from splashes gloves made of the following materials are suitable:**

\* nitril rubber 0,4 mm, 30 min

- **Eye protection:**



Tightly sealed goggles.

- **Body protection:**

Protective work clothing.

Boots

\*

## SECTION 9: Physical and chemical properties

- **9.1 Information on basic physical and chemical properties**

- **General Information**

- **Appearance:**

<b>Form:</b>	Fluid
<b>Colour:</b>	Brown
<b>Odour:</b>	Characteristic
<b>Odour threshold:</b>	Not determined.

<b>pH-value at 20 °C:</b>	0
<b>pH-value 1 %:</b>	2

- **Change in condition**

<b>Melting point/Melting range:</b>	undetermined
<b>Boiling point/Boiling range:</b>	100 °C

- **Flash point:**

Not applicable

- **Flammability (solid, gaseous)**

Not applicable.

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· <b>Ignition temperature:</b>	<i>not applicable</i>
· <b>Decomposition temperature:</b>	<i>Not determined.</i>
· <b>Self-igniting:</b>	<i>Product is not selfigniting.</i>
· <b>Danger of explosion:</b>	<i>Product does not present an explosion hazard.</i>
· <b>Explosion limits:</b>	
<b>Lower:</b>	<i>Not determined.</i>
<b>Upper:</b>	<i>Not determined.</i>
· <b>Vapour pressure:</b>	<i>Not determined.</i>
· <b>Density at 20 °C:</b>	<i>1,53 g/cm<sup>3</sup></i>
· <b>Relative density</b>	<i>Not determined.</i>
· <b>Vapour density</b>	<i>Not determined.</i>
· <b>Evaporation rate</b>	<i>Not determined.</i>
· <b>Solubility in / Miscibility with Water:</b>	<i>Fully miscible</i>
· <b>Partition coefficient (n-octanol/water):</b>	<i>Not determined.</i>
· <b>Viscosity:</b>	
<b>dynamic at 20 °C:</b>	<i>29 mPas</i>
<b>kinematic:</b>	<i>Not determined.</i>
· <b>Solvent content:</b>	
<b>Organic solvents:</b>	<i>0,0 %</i>
<b>VOC (EC)</b>	<i>0,00 %</i>
<b>Solids content:</b>	<i>47,0 %</i>
· <b>9.2 Other information</b>	<i>No further relevant information available.</i>

\*

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** corresponds to 10.3
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
*No decomposition if used according to specifications.*
- **10.3 Possibility of hazardous reactions**  
*Reacts with metals forming hydrogen*  
*Reacts with alkali (lyes)*
- **10.4 Conditions to avoid** *No further relevant information available.*
- **10.5 Incompatible materials:** *organic materials, metals, bases*
- **10.6 Hazardous decomposition products:** *No dangerous decomposition products known*

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\* **SECTION 11: Toxicological information**

· **11.1 Information on toxicological effects**

· **Acute toxicity:**

· **LD/LC50 values relevant for classification:**

Oral	LD50	1333 mg/kg (consumer)
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· **Primary irritant effect:**

· **on the skin:** Strong caustic effect on skin and mucous membranes.

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

· **Additional toxicological information:**

The product shows the following dangers according to the calculation method of the General EU Classification Guidelines for Preparations as issued in the latest version.

Harmful

Corrosive

Swallowing will lead to a strong caustic effect on mouth and throat and to the danger of perforation of esophagus and stomach.

\* **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.

· **Additional ecological information:**

· **General notes:**

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Must not reach sewage water or drainage ditch undiluted or unneutralised.

Rinse off of bigger amounts into drains or the aquatic environment may lead to decreased pH-values.

A low pH-value harms aquatic organisms. In the dilution of the use-level the pH-value is considerably increased, so that after the use of the product the aqueous waste, emptied into drains, is only low water-dangerous.

AOX: < 10 mg/kg

· **12.5 Results of PBT and vPvB assessment**

· **PBT:** Not applicable.

· **vPvB:** Not applicable.

· **12.6 Other adverse effects** No further relevant information available.

\* **SECTION 13: Disposal considerations**

· **13.1 Waste treatment methods**

· **Recommendation**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

Must be specially treated adhering to official regulations.

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· **European waste catalogue**

06 03 14 solid salts and solutions other than those mentioned in 06 03 11 and 06 03 13

· **Uncleaned packaging:**

· **Recommendation:** Non contaminated packagings may be recycled.

· **Recommended cleansing agents:** Water, if necessary together with cleaning agents.

**SECTION 14: Transport information**

· **14.1 UN-Number**

· **ADR, IMDG, IATA** UN3264

· **14.2 UN proper shipping name**

· **ADR** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Ferric (III) chloride sulfate)  
· **IMDG, IATA** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Ferric (III) chloride sulfate)

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 8 (C1) Corrosive substances.  
· **Label** 8

· **IMDG, IATA**



· **Class** 8 Corrosive substances.  
· **Label** 8

· **14.4 Packing group**

· **ADR, IMDG, IATA** III

· **14.5 Environmental hazards:**

· **Marine pollutant:** No

· **14.6 Special precautions for user**

Warning: Corrosive substances.

· **Danger code (Kemler):** 80

· **EMS Number:** F-A,S-B

· **Segregation groups** Acids

· **14.7 Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code**

Not applicable.

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**· 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**

E

**· IMDG**

· **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

· **UN "Model Regulation":**

UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Ferric (III) chloride sulfate), 8, III

\* **SECTION 15: Regulatory information**

· **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**

· **National regulations**

· **Information about limitation of use:**

Employment restrictions concerning juveniles must be observed.

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

\* **SECTION 16: Other information**

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

*A product information sheet can be provided if requested.*

· **Relevant phrases**

H302 Harmful if swallowed.

H314 Causes severe skin burns and eye damage.

R22 Harmful if swallowed.

R34 Causes burns.

· **Department issuing MSDS: PDE-D**

· **Contact:**

Department PDE-D

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**· Abbreviations and acronyms:**

*ADR: Accord européen sur le transport 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)*

*VOC: Volatile Organic Compounds (USA, EU)*

*LC50: Lethal concentration, 50 percent*

*LD50: Lethal dose, 50 percent*

*Met. Corr. 1: Corrosive to metals, Hazard Category 1*

*Acute Tox. 4: Acute toxicity, Hazard Category 4*

*Skin Corr. 1B: Skin corrosion/irritation, Hazard Category 1B*

*Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1*

**· \* Data compared to the previous version altered.**

· 0.011-666.0                      RM 5001/1.1                      1.950