

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006

Revision Date 26.10.2015

Version 3.5

## SECTION 1. Identification of the substance/mixture and of the company/undertaking

### 1.1 Product identifier

Catalogue No.	600-039
Product name	FERRIC CHLORIDE STAIN REMOVER
REACH Registration Number	A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.
CAS-No.	144-62-7

### 1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Ferric Chloride Stain Removal
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### 1.3 Details of the supplier of the safety data sheet

Responsible Department	sales@megauk.com
Regional representation	Mega Electronics Ltd The Grip Ind Est , Linton Cambridge , CB21 4XN. UK.

1.4 Emergency telephone number	+44 (0)1223 893900
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## SECTION 2. Hazards identification

### 2.1 Classification of the substance or mixture

Classification (REGULATION (EC) No 1272/2008)

Acute toxicity, Category 4, Oral, H302

Acute toxicity, Category 4, Dermal, H312

For the full text of the H-Statements mentioned in this Section, see Section 16.

Classification (67/548/EEC or 1999/45/EC)

Xn Harmful R21/22

For the full text of the R-phrases mentioned in this Section, see Section 16.

### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



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Warning

### *Hazard statements*

H302 + H312 Harmful if swallowed or in contact with skin

### *Precautionary statements*

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

Reduced labelling (≤125 ml)

*Hazard pictograms*



*Signal word*

Warning

*Index-No.* 607-006-00-8

## 2.3 Other hazards

None known.

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## SECTION 3. Composition/information on ingredients

### 3.1 Substance

Formula	HOCCOOH	C <sub>2</sub> H <sub>2</sub> O <sub>4</sub> (Hill)
Index-No.	607-006-00-8	
EC-No.	205-634-3	
Molar mass	90.03 g/mol	

### Hazardous components (REGULATION (EC) No 1272/2008)

*Chemical Name (Concentration)*

CAS-No.	Registration number	Classification
Oxalic acid (≤ 100 %)		
144-62-7	*)	Acute toxicity, Category 4, H302 Acute toxicity, Category 4, H312

\*) A registration number is not available for this substance as the substance or its use are exempted from registration according to Article 2 REACH Regulation (EC) No 1907/2006, the annual tonnage does not require a registration or the registration is envisaged for a later registration deadline.

For the full text of the H-Statements mentioned in this Section, see Section 16.

### Hazardous components (1999/45/EC)

*Chemical Name (Concentration)*

CAS-No.	Classification
Oxalic acid (≤ 100 %)	
144-62-7	Xn, Harmful; R21/22

For the full text of the R-phrases mentioned in this Section, see Section 16.

### 3.2 Mixture

Not applicable

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## SECTION 4. First aid measures

### 4.1 Description of first aid measures

After inhalation: fresh air.

In case of skin contact: Take off immediately all contaminated clothing. Rinse skin with water/shower. Consult a physician.

After eye contact: rinse out with plenty of water.

After swallowing: immediately make victim drink water (two glasses at most). Consult a physician.

### 4.2 Most important symptoms and effects, both acute and delayed

Irritation and corrosion, agitation, spasms, Nausea, Vomiting, cardiovascular disorders, collapse  
The following applies to oxalates in general: nausea and vomiting after swallowing. Mucosal irritations, coughing, and dyspnoea after inhalation. Systemic effect: drop in the blood calcium level, toxic effect on kidneys, cardiovascular disorders.

### 4.3 Indication of any immediate medical attention and special treatment needed

No information available.

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## SECTION 5. Firefighting measures

### 5.1 Extinguishing media

*Suitable extinguishing media*

Water, Carbon dioxide (CO<sub>2</sub>), Foam, Dry powder

*Unsuitable extinguishing media*

For this substance/mixture no limitations of extinguishing agents are given.

### 5.2 Special hazards arising from the substance or mixture

Combustible.

Development of hazardous combustion gases or vapours possible in the event of fire.

### 5.3 Advice for firefighters

*Special protective equipment for firefighters*

Stay in danger area only with self-contained breathing apparatus. Prevent skin contact by keeping a safe distance or by wearing suitable protective clothing.

*Further information*

Prevent fire extinguishing water from contaminating surface water or the ground water system.

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## SECTION 6. Accidental release measures

### 6.1 Personal precautions, protective equipment and emergency procedures

Advice for non-emergency personnel: Avoid inhalation of dusts. Avoid substance contact. Ensure adequate ventilation. Evacuate the danger area, observe emergency procedures, consult an expert.

Advice for emergency responders:

Protective equipment see section 8.

### 6.2 Environmental precautions

Do not empty into drains.

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## 6.3 Methods and materials for containment and cleaning up

Cover drains. Collect, bind, and pump off spills. Observe possible material restrictions (see sections 7 and 10). Take up dry. Dispose of properly. Clean up affected area. Avoid generation of dusts.

## 6.4 Reference to other sections

Indications about waste treatment see section 13.

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## SECTION 7. Handling and storage

### 7.1 Precautions for safe handling

#### *Advice on safe handling*

Observe label precautions.

#### *Hygiene measures*

Immediately change contaminated clothing. Apply preventive skin protection. Wash hands and face after working with substance.

### 7.2 Conditions for safe storage, including any incompatibilities

#### *Storage conditions*

Tightly closed. Dry.

Recommended storage temperature: Normal Room Temperature. Avoid Extreme Heat.

### 7.3 Specific end use(s)

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated.

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## SECTION 8. Exposure controls/personal protection

### 8.1 Control parameters

#### Components with workplace control parameters

#### *Components*

Basis	Value	Threshold limits	Remarks
<i>Oxalic acid (144-62-7)</i>			
EH40 WEL	Short Term Exposure Limit (STEL):	2 mg/m <sup>3</sup>	
	Time Weighted Average (TWA):	1 mg/m <sup>3</sup>	

#### Recommended monitoring procedures

Methods for measurement of the workplace atmosphere have to correspond to the relevant local norms.

### 8.2 Exposure controls

#### Engineering measures

Technical measures and appropriate working operations should be given priority over the use of personal protective equipment.

See section 7.1.

#### Individual protection measures

Protective clothing needs to be selected specifically for the workplace, depending on concentrations and quantities of the hazardous substances handled. The chemical resistance of the protective equipment should be enquired at the respective supplier.

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## *Eye/face protection*

Safety glasses

## *Hand protection*

full contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 480 min

splash contact:

Glove material: Nitrile rubber  
Glove thickness: 0.11 mm  
Break through time: > 480 min

The protective gloves to be used must comply with the specifications of EC Directive 89/686/EEC and the related standard EN374.

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types.

This recommendation applies only to the product stated in the safety data sheet (>,<) supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves.

## *Other protective equipment*

protective clothing

## *Respiratory protection*

required when dusts are generated.

Recommended Filter type: Filter P 2 for solid and liquid particles of harmful substances

The user has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

## **Environmental exposure controls**

Do not empty into drains.

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## **SECTION 9. Physical and chemical properties**

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

Form	solid
Colour	white
Odour	odourless
Odour Threshold	Not applicable
pH	ca. 1 at 100 g/l 20 °C
Melting point	189 °C (decomposition)

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Boiling point	No information available.
Flash point	Not applicable, (decomposition)
Evaporation rate	No information available.
Flammability (solid, gas)	No information available.
Lower explosion limit	No information available.
Upper explosion limit	No information available.
Vapour pressure	21.5 hPa at 50 °C
Relative vapour density	No information available.
Density	1.9 g/cm <sup>3</sup> at 20 °C
Relative density	No information available.
Water solubility	220 g/l at 25 °C (experimental)
Partition coefficient: n-octanol/water	log Pow: -0.81 (30 °C) (IUCRID) Bioaccumulation is not expected.
Auto-ignition temperature	No information available.
Decomposition temperature	> 157 °C
Viscosity, dynamic	No information available.
Explosive properties	Not classified as explosive.
Oxidizing properties	none

## 9.2 Other data

Bulk density ca.750 kg/m<sup>3</sup>

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## SECTION 10. Stability and reactivity

### 10.1 Reactivity

The following applies in general to flammable organic substances and mixtures: in correspondingly fine distribution, when whirled up a dust explosion potential may generally be assumed.

### 10.2 Chemical stability

sensitive to moisture

### 10.3 Possibility of hazardous reactions

Risk of explosion with:

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chlorates, sodium hypochlorite, Strong oxidizing agents, silver, salts of oxyhalogenic acids

Exothermic reaction with:

bases, Ammonia, Mercury

## 10.4 Conditions to avoid

Strong heating (decomposition).

## 10.5 Incompatible materials

no information available

## 10.6 Hazardous decomposition products

no information available

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## SECTION 11. Toxicological information

### 11.1 Information on toxicological effects

#### *Acute oral toxicity*

LD50 Rat: 375 mg/kg (IUCLID)

absorption

Symptoms: Irritations of mucous membranes in the mouth, pharynx, oesophagus and gastrointestinal tract.

#### *Acute inhalation toxicity*

This information is not available.

#### *Acute dermal toxicity*

absorption

Acute toxicity estimate : 1,100.1 mg/kg

Expert judgement

#### *Skin irritation*

Rabbit

Result: No irritation

OECD Test Guideline 404

#### *Eye irritation*

This information is not available.

#### *Sensitisation*

Mouse

Result: negative

Method: OECD Test Guideline 429

#### *Germ cell mutagenicity*

#### *Genotoxicity in vitro*

Ames test

Salmonella typhimurium

Result: negative

Method: OECD Test Guideline 471

#### *Carcinogenicity*

This information is not available.

#### *Reproductive toxicity*

This information is not available.

#### *Teratogenicity*

This information is not available.

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### *Specific target organ toxicity - single exposure*

This information is not available.

### *Specific target organ toxicity - repeated exposure*

This information is not available.

### *Aspiration hazard*

This information is not available.

## 11.2 Further information

Systemic effects:

After absorption:

agitation, spasms, Nausea, Vomiting, cardiovascular disorders, collapse, disturbed electrolyte balance.

Secondary products cause:

Damage to:

Kidney

The following applies to oxalates in general: nausea and vomiting after swallowing. Mucosal irritations, coughing, and dyspnoea after inhalation. Systemic effect: drop in blood calcium level, toxic effect on kidneys, cardiovascular disorders.

Handle in accordance with good industrial hygiene and safety practice.

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## SECTION 12. Ecological information

### 12.1 Toxicity

#### *Toxicity to fish*

LC50 *Leuciscus idus* (Golden orfe): 160 mg/l; 48 h (IUCLID)

#### *Toxicity to daphnia and other aquatic invertebrates*

EC50 *Daphnia magna* (Water flea): 162.2 mg/l; 48 h

OECD Test Guideline 202

### 12.2 Persistence and degradability

#### *Biodegradability*

40 %; 5 d

(IUCLID)

#### *Biochemical Oxygen Demand (BOD)*

160 mg/g (5 d)

(IUCLID)

#### *Chemical Oxygen Demand (COD)*

180 mg/g

(IUCLID)

#### *Theoretical oxygen demand (ThOD)*

180 mg/g

### 12.3 Bioaccumulative potential

#### *Partition coefficient: n-octanol/water*

log Pow: -0.81 (30 °C)

(IUCLID) Bioaccumulation is not expected.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted.

### 12.6 Other adverse effects

Discharge into the environment must be avoided.



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## SECTION 13. Disposal considerations

### *Waste treatment method*

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. Leave chemicals in original containers. No mixing with other waste. Handle uncleaned containers like the product itself.

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## SECTION 14. Transport information

### Land transport (ADR/RID)

14.1 UN number	UN 3261
14.2 Proper shipping name	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (OXALIC ACID)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
Tunnel restriction code	E

### Inland waterway transport (ADN)

Not relevant

### Air transport (IATA)

14.1 UN number	UN 3261
14.2 Proper shipping name	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (OXALIC ACID)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no

### Sea transport (IMDG)

14.1 UN number	UN 3261
14.2 Proper shipping name	CORROSIVE SOLID, ACIDIC, ORGANIC, N.O.S. (OXALIC ACID)
14.3 Class	8
14.4 Packing group	II
14.5 Environmentally hazardous	--
14.6 Special precautions for user	yes
EmS	F-A S-B

### 14.7 Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not relevant

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## SECTION 15. Regulatory information

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

#### *EU regulations*

Major Accident Hazard Legislation 96/82/EC  
Directive 96/82/EC does not apply

Occupational restrictions Take note of Dir 94/33/EC on the protection of young people at work. Observe work restrictions regarding maternity protection in accordance to Dir 92/85/EEC or stricter national regulations where applicable.

Regulation (EC) No 1005/2009 on substances that deplete the ozone layer not regulated

Regulation (EC) No 850/2004 of the European Parliament and of the Council of 29 April 2004 on persistent organic pollutants and amending Directive 79/117/EEC not regulated

Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals not regulated

Substances of very high concern (SVHC) This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of  $\geq 0.1\%$  (w/w).

#### *National legislation*

Storage class 8A

### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out.

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## SECTION 16. Other information

### Full text of H-Statements referred to under sections 2 and 3.

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.

### Full text of R-phrases referred to under sections 2 and 3

R21/22 Harmful in contact with skin and if swallowed.

### Training advice

Provide adequate information, instruction and training for operators.

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**Labelling**

*Hazard pictograms*



*Signal word*

Warning

*Hazard statements*


H302 + H312 Harmful if swallowed or in contact with skin

*Precautionary statements*

Response

P302 + P352 IF ON SKIN: Wash with plenty of soap and water.

**Labelling (67/548/EEC or 1999/45/EC)**

<i>Symbol(s)</i>	 Xn	Harmful
<i>R-phrase(s)</i>	21/22	Harmful in contact with skin and if swallowed.
<i>S-phrase(s)</i>	24/25	Avoid contact with skin and eyes.
EC-No.	205-634-3	EC Label

**Key or legend to abbreviations and acronyms used in the safety data sheet**

Used abbreviations and acronyms can be looked up at [www.wikipedia.org](http://www.wikipedia.org).

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*The information contained herein is based on the present state of our knowledge. It characterises the product with regard to the appropriate safety precautions. It does not represent a guarantee of any properties of the product.*