

# SAFETY DATA SHEET

according to Regulation (EC) No. 1907/2006 (REACH), amended with 2015/830 / EU



## Greinox FIX

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

Information on the product / trade name:

**Greinox FIX**

for Surface treatment  
only for industrial use

REACH Registration Number:

A registration number for this substance is not available as the substance or its use is exempted from registration under Article 2 of REACH Regulation (EC) No 1907/2006, which does not require registration or is planned for a later date.

Information on the manufacturer / supplier:

**Kai Greising e. K. Clean Marker**  
Industriestraße 29/2  
73340 Amstetten  
Germany  
**phone: 0049-7331-3058-0**  
**fax: 0049-7331-981722**

Emergency phone number

**Poison emergency call center Freiburg**  
**phone: 0049-761-19240**

### SECTION 2: Hazards identification:

#### 2.1 Classification of the substance or mixture

Classification REGULATION (EC) No 1272/2008 (CLP)

Classification acc. to GHS			
Section	Hazard class	Hazard class and category	Hazard statement
2.16	corrosive to metals	(Met. Corr. 1)	H290
3.2	skin corrosion/irritation	(Skin Corr. 1B)	H314

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

#### 2.2 Label elements

Labelling (REGULATION (EC) No 1272/2008)

Hazard pictograms



Signal word  
Danger

H290

May be corrosive to metals.

H314

Causes severe skin burns and eye damage.

Precautionary statements

Prevention

P280 Wear protective gloves/ protective clothing/ eye protection/ face protection.

Response

P303+P361+P353 IF ON SKIN (or hair): take off immediately all contaminated clothing. Rinse skin with water/shower.

P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

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P308 + P310 IF exposed or affected: Immediately call a POISON CENTER or doctor/physician.

### 2.3 Other hazards

during neutralization, the solution can become very hot

## SECTION 3: Composition/information on ingredients

Chemical nature: Aqueous solution.

### 3.1 Substance

Not applicable

### 3.2 Mixture

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

Chemical Name (Concentration)

Name of substance	Identifier	wt%	Classification acc. to 1272/2008/EC	Pictograms
orthophosphoric acid	CAS No 7664-38-2  EC No 231-633-2  Index No 015-011-00-6  REACH Reg. No 01-2119485924-24- xxxx	25 - 75	Met. Corr. 1 / H290 Skin Corr. 1B / H314	

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

## SECTION 4: First aid measures

### 4.1 Description of first aid measures



#### General notes

Take off immediately all contaminated clothing. Self-protection of the first aider.

#### Following inhalation

Remove person to fresh air and keep comfortable for breathing. If breathing is irregular or stopped, immediately seek medical assistance and start first aid actions.

#### Following skin contact

After contact with skin, wash immediately with plenty of water. Immediate medical treatment required because corrosive injuries that are not treated are hard to cure.

#### Following eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye.

#### Following ingestion

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects). Call a physician immediately.

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

Irritation, Corrosion, Cough, Dyspnoea, Spasms, Gastric perforation, Risk of blindness

### 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

Co-ordinate fire-fighting measures to the fire surroundings water spray, foam, dry extinguishing powder, carbon dioxide (CO<sub>2</sub>)

#### Unsuitable extinguishing media

water jet

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

Not combustible.

#### Hazardous combustion products

In case of fire may be liberated: phosphorus oxides (PxOy)

May produce toxic fumes of carbon monoxide if burning

### 5.3 Advice for firefighters

Fight fire with normal precautions from a reasonable distance. Wear self-contained breathing apparatus. Wear full chemical protective clothing

Further information

Suppress (knock down) gases/vapors/mists with a water spray jet. 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 contact with skin and eyes. Do not breathe vapour/spray. Wearing of suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing.

Advice for emergency responders: Protective equipment see section 8.

### 6.2 Environmental precautions

Keep away from drains, surface and ground water. The product is an acid. Before discharge into sewage plants the product normally needs to be neutralised.

### 6.3 Methods and materials for containment and cleaning up

#### Advices on how to contain a spill

Covering of drains.

#### Advices on how to clean up a spill

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents).

#### Other information relating to spills and releases

Place in appropriate containers for disposal

### 6.4 Reference to other sections

Hazardous combustion products: see section 5. Personal protective equipment: see section 8.

Incompatible materials: see section 10. Disposal considerations: see section 13.

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### SECTION 7: Handling and storage

#### 7.1 Precautions for safe handling

Handle and open container with care. Clear contaminated areas thoroughly. When diluting/dissolving, always have the water ready first, and then slowly stir in the product.

#### Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Wash hands before breaks and after work.

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

Storage conditions

Keep container tightly closed.

#### Incompatible substances or mixtures

Observe hints for combined storage.

#### Consideration of other advice

Not required

#### • Ventilation requirements

Use local and general ventilation.

#### • Specific designs for storage rooms or vessels

Recommended storage temperature: 20 – 25 °C.

#### 7.3 Specific end use(s)

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

### SECTION 8: Exposure controls/personal protection

#### 8.1 Control parameters

#### National limit values

#### Occupational exposure limit values (Workplace Exposure Limits)

Country	Name of agent	CAS No	Notation	Identifier	TWA [mg/m <sup>3</sup> ]	STEL [mg/m <sup>3</sup> ]	Source
EU	orthophosphoric acid (phosphoric acid)	7664-38-2		IOELV	1	2	2000/39/EC
UK	orthophosphoric acid	7664-38-2		WEL	1	2	EH40/2005

#### Notation

STEL Short-term exposure limit: a limit value above which exposure should not occur and which is related to a 15-minute period unless otherwise specified

TWA Time-weighted average (long-term exposure limit): measured or calculated in relation to a reference period of 8 hours time-weighted average

#### Relevant DNELs/DMELs/PNECs and other threshold levels

#### relevant DNELs of components of the mixture

Name of substance	CAS No	End-point	Threshold level	Protection goal, route of exposure	Used in	Exposure time
orthophosphoric acid	7664-38-2	DNEL	2 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	acute - local effects
orthophosphoric acid	7664-38-2	DNEL	1 mg/m <sup>3</sup>	human, inhalatory	worker (industry)	chronic - local effects

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### 8.2 Exposure controls

#### Individual protection measures (personal protective equipment)



#### Eye/face protection

Use safety goggle with side protection. Wear face protection.

#### Skin protection

##### hand protection

Wear suitable gloves. Chemical protection gloves are suitable, which are tested according to EN 374. Check leak-tightness/impermeability prior to use. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

- **type of material**

NBR (Nitrile rubber)

- **material thickness**

0,2mm.

- **breakthrough times of the glove material**

>480 minutes (permeation: level 6)

- **other protection measures**

Take recovery periods for skin regeneration. Preventive skin protection (barrier creams/ointments) is recommended.

#### Respiratory protection

Respiratory protection necessary at: Aerosol or mist formation. Type: B-P2 (combined filters for acidic gases and particles, colour code: Grey/White).

Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

#### Environmental exposure controls

Keep away from drains, surface and ground water.

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## SECTION 9: Physical and chemical properties

Form	liquid
Colour	red
Odour	odourless
Odour Threshold	Not applicable
pH	<1 at 20°C
Melting point	No information available.
Boiling point	No information available.
Flash point	do not flash
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	No information available.
Relative vapour density	No information available.
Density	1,15 g/cm <sup>3</sup> at 20°C
Relative density	No information available.
Water solubility	soluble
Partition coefficient: n-octanol/water	No information available.

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Auto-ignition temperature  
Decomposition temperature  
Viscosity, dynamic  
Explosive properties  
Oxidizing properties

not combustible  
No information available.  
No information available.  
Not classified as explosive.  
none

### 9.2 Other data

Corrosion

May be corrosive to metals.

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## SECTION 10: Stability and reactivity

### 10.1 Reactivity

corrosive to metals

### 10.2 Chemical stability

The material is stable under normal ambient and anticipated storage and handling conditions of temperature and pressure.

### 10.3 Possibility of hazardous reactions

Risk of ignition or formation of inflammable gases or vapours with:

Metals, Light metals, metal alloys

Possible formation of:

Hydrogen

Violent reactions possible with:

bases, metallic oxides

### 10.4 Conditions to avoid

Keep away from heat.

### 10.5 Incompatible materials

Aluminium, iron/iron-containing compounds, Mild steel

Gives off hydrogen by reaction with metals

### 10.6 Hazardous decomposition products

in the event of fire: See section 5.

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## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

Mixture

This mixture does not meet the criteria for classification in accordance with Regulation No 1272/2008/EC.

#### **Skin corrosion/irritation**

Causes severe burns.

#### **Serious eye damage/eye irritation**

Causes serious eye damage.

#### **Respiratory or skin sensitisation**

Shall not be classified as a respiratory or skin sensitiser.

#### **Summary of evaluation of the CMR properties**

Shall not be classified as germ cell mutagenic, carcinogenic nor as a reproductive toxicant

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

Shall not be classified as a specific target organ toxicant (single exposure).

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

Shall not be classified as a specific target organ toxicant (repeated exposure).

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### Aspiration hazard

Shall not be classified as presenting an aspiration hazard.

### Symptoms related to the physical, chemical and toxicological characteristics

#### • If swallowed

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects), Spasms

#### • If in eyes

causes burns, Causes serious eye damage, risk of blindness

#### • If inhaled

cough, Dyspnoea, corrosive to the respiratory tract

#### • If on skin

causes severe burns, causes poorly healing wounds

### Other information

None.

## 11.2 Further information

None

## SECTION 12: Ecological information

### 12.1 Toxicity

acc. to 1272/2008/EC: Shall not be classified as hazardous to the aquatic environment.

#### Aquatic toxicity (acute)

#### Aquatic toxicity (acute) of components of the mixture

Name of substance	CAS No	Endpoint	Value	Species	Exposure time
orthophosphoric acid	7664-38-2	EC50	>100 mg/l	aquatic invertebrates	48 hours
orthophosphoric acid	7664-38-2	ErC50	>100 mg/l	algae	72 hours

### 12.2 Persistence and degradability

#### Biodegradability

The methods for determining the biological degradability are not applicable to inorganic substances.

### 12.3 Bioaccumulative potential

No information available.

### 12.4 Mobility in soil

No information available.

### 12.5 Results of PBT and vPvB assessment

Data are not available.

### 12.6 Other adverse effects

Slightly hazardous to water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

This material and its container must be disposed of as hazardous waste. Dispose of contents/ container in accordance with local/regional/national/international regulations.

#### Sewage disposal-relevant information

Do not empty into drains.

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### Waste treatment of containers/packagings

It is a dangerous waste; only packaging which are approved (e.g. acc. to ADR) may be used.

### 13.2 Relevant provisions relating to waste

The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process

### 13.3 Remarks

Waste shall be separated into the categories that can be handled separately by the local or national waste management facilities. Please consider the relevant national or regional provisions.

Notice Directive on waste 2008/98/EC.

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## SECTION 14: Transport information

Land transport (ADR/RID)

14.1 UN number	UN 1805
14.2 Proper shipping name	PHOSPHORIC ACID, SOLUTION
14.3 Class	8 (corrosive substances)
14.4 Packing group	III (substance presenting low danger)
14.5 Environmentally hazardous	none (non-environmentally hazardous acc. to the dangerous goods regulations)

14.6 Special precautions for user	yes
Tunnel restriction code	E

14.7 Transport in bulk according to Annex II of MARPOL and the IBC Code  
The cargo is not intended to be carried in bulk.

### 14.8 Information for each of the UN Model Regulations

#### Transport of dangerous goods by road, rail and inland waterway (ADR/RID/ADN)

Particulars in the transport document	UN1805, PHOSPHORIC ACID, SOLUTION, mixture, 8, III, (E)
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Classification code	C1
Danger la bel(s)	8



Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Transport category (TC)	3
Tunnel restriction code (TRC)	E
Hazard identification No	80

Inland waterway transport (ADN)  
Not relevant

### Air transport (IATA)

14.1 UN number	UN 1805
14.2 Proper shipping name	PHOSPHORIC ACID, SOLUTION
14.3 Class	8
14.4 Packing group	III
14.5 Environmentally hazardous	--
14.6 Special precautions for user	no



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### Sea transport (IMDG)

14.1 UN number	UN 1805
14.2 Proper shipping name	PHOSPHORIC ACID, SOLUTION
14.3 Class	8
14.4 Packing group	III
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
14.8 International Maritime Dangerous Goods Code (IMDG)	
Special provisions (SP)	223
Excepted quantities (EQ)	E1
Limited quantities (LQ)	5 L
Stowage category	A
Segregation group	1 - Acids

## SECTION 15: Regulatory information

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

EU regulations

Major Accident Hazard

SEVESO III

Legislation

Not applicable

Occupational restrictions

Take note of Dir 94/33/EC on the protection of young people at work.

#### Relevant provisions of the European Union (EU)

• **Regulation 649/2012/EU concerning the export and import of hazardous chemicals (PIC)**

None of the ingredients are listed.

• **Regulation 1005/2009/EC on substances that deplete the ozone layer (ODS)**

None of the ingredients are listed.

• **Regulation 850/2004/EC on persistent organic pollutants (POP)**

None of the ingredients are listed.

• **Restrictions according to REACH, Annex XVII**

None of the ingredients are listed.

• **List of substances subject to authorisation (REACH, Annex XIV)**

None of the ingredients are listed.

• **Limitation of emissions of volatile organic compounds due to the use of organic solvents in certain paints and varnishes and vehicle refinishing products (2004/42/EC, Deco-Paint Directive)**

VOC content 0 %

• **Directive on industrial emissions (VOCs, 2010/75/EU)**

VOC content 0 %

**Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS) - Annex II**

None of the ingredients are listed.

**Regulation 166/2006/EC concerning the establishment of a European Pollutant Release and Transfer Register (PRTR)**

None of the ingredients are listed.

**Directive 2000/60/EC establishing a framework for Community action in the field of water policy (WFD)**

None of the ingredients are listed.

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### 15.2 Chemical Safety Assessment

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

### SECTION 16: Other Information

#### Abbreviations and acronyms

Abbr.	Descriptions of used abbreviations
2000/39/EC	Commission Directive establishing a first list of indicative occupational exposure limit values in implementation of Council Directive
ADN	Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures (European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways)
ADR	Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
CAS	Chemical Abstracts Service (service that maintains the most comprehensive list
CLP	Regulation (EC) No 1272/2008 on classification, labelling and packaging of
CMR	Carcinogenic, Mutagenic or toxic for Reproduction
DMEL	Derived Minimal Effect Level
DNEL	Derived No-Effect Level
EC No	The EC Inventory (EINECS, ELINCS and the NLP-list) is the source for the seven-digit EC number, an identifier of substances commercially available within the EU (European Union)
EH40/2005	EH40/2005 Workplace exposure limits, Table 1: List of approved workplace exposure limits
EmS	Emergency Schedule
GHS	"Globally Harmonized System of Classification and Labelling of Chemicals"
IMDG	International Maritime Dangerous Goods Code
index No	the Index number is the identification code given to the substance in Part 3 of Annex VI to Regulation (EC) No 1272/2008
MARPOL	International Convention for the Prevention of Pollution from Ships (abbr. of
Met. Corr.	corrosive to metals
PBT	Persistent, Bioaccumulative and Toxic
PNEC	Predicted No-Effect Concentration
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals
RID	Règlement concernant le transport International ferroviaire des marchandises Dangereuses (Regulations concerning the International
Skin Corr.	corrosive to skin
Skin Irrit.	irritant to skin
VOC	Volatile Organic Compounds
vPvB	very Persistent and very Bioaccumulative

#### Key literature references and sources for data

- Regulation (EC) No. 1907/2006 (REACH), amended by 2015/830/EU
- Regulation (EC) No. 1272/2008 (CLP, EU GHS)

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### List of relevant phrases (code and full text as stated in chapter 2 and 3)

Code	Text
H290	may be corrosive to metals
H314	causes severe skin burns and eye damage

#### Training advice

Provide adequate information, instruction and training for operators.

#### Disclaimer

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

It does not represent a guarantee of any properties of the product.

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