



# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH)

Version: 1

Language: EN

Revision date: 23.04.2013

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

### 1.1 Product identifier

# Greinox RP

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

**Identified uses of the substance or mixture:** Etchant and acids

**Not recommended uses of the substance or mixture:** Other

### 1.3 Details of the supplier of the safety data sheet

#### Manufacturer / Supplier

Kai Greising e. K. Clean Marker

Industriestrasse 29/2  
D 73340 Amstetten

**Telephone:** +49 (0) 7331 30 580

**Fax:** +49 (0) 7331 981 722

#### Information contact

Kai Greising e. K. Clean Marker

**Information Telephone:** +49 (0) 7331 30 580

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#### National contact

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**Information Telephone:** +49 (0) 7331 30 580

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**E-mail (competent person):** -

**Website:** <http://www.greising.com/>

### 1.4 Emergency telephone number

Giftnotrufzentrale Freiburg

**Telephone:** +49 (0) 761 19 240

### 1.5 Dept. responsible for information

Kai Greising e. K. Clean Marker

## 2. Hazards identification

### 2.1 Classification of the substance or mixture

Regulation (EC) No 1272/2008:  
Skin Corr. 1A; H314 , Metal Cor. 1; H290

Directive 67/548/EEC:  
C; R35

### 2.2 Label elements

## 2.2.1 Labelling according to Regulation (EC) No 1272/2008

Hazard pictograms:



**Signal word:** GHS05  
Danger

**H phrases:** 290 May be corrosive to metals.  
314 Causes severe skin burns and eye damage.

**P phrases:** 280 Wear protective gloves/protective clothing/eye protection/face protection.  
301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
309 IF exposed or if you feel unwell:  
310 Immediately call a POISON CENTER or doctor/physician.

## 2.2.2 Labelling according to Directive 67/548/EEC

Hazard symbols:



**R phrases:** C Corrosive.  
35 Causes severe burns.

**S phrases:** 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
30 Never add water to this product.  
36/37/39 Wear suitable protective clothing, gloves and eye/face protection.  
45 In case of accident or if you feel unwell, seek medical advice immediately (show this label if possible).

## 2.3 Other hazards

See attached safety data sheets and/or usage instructions.

## 3. Composition/information on ingredients

### 3.1 Chemical characterization of the substance or mixture

Aqueous solution of mineral acids and organic substances.

### 3.2 Composition of the substance or mixture

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008(CLP):	Classification: 67/548/EEC:
Nitric acid	231-714-2	7697-37-2	007-004-00-1		20 – 50 wt-%	Metal Cor. 1; H290 Skin Corr. 1A; H314	C; R35

#### Ingredients with EC exposure limits

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008(CLP):	Classification: 67/548/EEC:

(The wording of the listed risk phrases is given in Chapter 16)

### 3.3 Additional information

none

## 4. First aid measures

### 4.1 Description of first aid measures

- General information:** In case of accident or if you feel unwell, seek medical advice immediately (show safety data sheet if possible).
- Following inhalation:** Move victim to fresh air. Put victim at rest and keep warm. Immediately get medical attention.
- After skin contact:** After contact with skin, wash immediately with plenty of water and soap. Immediately get medical attention.
- Following eye contact:** In case of contact with eyes, rinse immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart. Subsequently consult an ophthalmologist.
- After ingestion:** Rinse mouth immediately and drink large quantities of water. No administration in cases of unconsciousness or cramps. Do not induce vomiting. Immediately get medical attention.
- Self-protection:** First aid assistant: Pay attention to self-protection!

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

- Symptoms:** Causes skin irritation. Respiratory complaints. Pulmonary irritation
- Nature of Hazard:** Causes burns. Pulmonary oedema.

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

- Emergency aid:** Let water be swallowed in little sips (dilution effect). Do not induce vomiting.
- Treatment:** First Aid, decontamination, treatment of symptoms. Apply cortisone spray at early stage.

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## 5. Fire fighting measures

### 5.1 General information

Extinguishing materials should be selected according to the surrounding area. The product itself is not combustible.

### 5.2 Extinguishing media

- Suitable:** Water fog. Carbon dioxide (CO<sub>2</sub>). Foam. Dry extinguishing powder.
- Unsuitable:** none

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

Can be released in case of fire: Nitrogen oxides.

### 5.4 Advice for fire fighters

#### Special protective equipment for fire-fighters

In case of fire: Wear self-contained breathing apparatus. Wear chemical resistant suit.

#### Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

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## 6. Accidental release measures

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

Wear personal protection equipment. Provide adequate ventilation.

### 6.2 Environmental precautions

Do not empty into drains or the aquatic environment. Do not allow to enter into soil/subsoil.

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

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

Treat the assimilated material according to the section on waste disposal. Avoid generation of dust. Clear contaminated area thoroughly. Wash with generous amount of water.

## 6.4 References to other sections

See protective measures under point 7 and 8.

## 7. Handling and storage

### 7.1 Precautions for safe handling

#### Information for safe handling

Avoid contact with skin and eyes.

#### Technical measures

No special technical protective measures are necessary.

#### Precautions against fire and explosion

Usual measures for fire prevention.

#### Additional information

Corrosive to metals.

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

#### Technical measures and storage conditions

No special technical protective measures are necessary.

#### Packaging materials

Keep/Store only in original container.

#### Requirements for storerooms and containers

Keep container tightly closed.

#### Information about storing together in storage facility

Do not store together with: metal. Oxidizing agents. Keep away from food, drink and animal feedingstuffs.

#### Further information concerning storage conditions

none

**Storage class:** 8 B Non-combustible corrosive substances.

### 7.3 Specific end use(s)

Observe instructions for use.

## 8. Exposure controls / personal protection

### 8.1 Control parameters

#### 8.1.1 Limits for occupational exposure

##### Exposure limit values

Substance:	CAS-No.:	Source:	Occupational exposure limit value:	Limitation of exposure peaks:	Remark:

##### EC exposure limit values

Substance:	CAS-No.:	Source:	Occupational exposure limit value:	Limitation of exposure peaks:	Remark:
Nitric acid	7697-37-2	GESTIS International Limit Values (Nitric Acid 03/13)	2,6 mg/m <sup>3</sup>	-	EU

## 8.1.2 DNEL and PNEC values

### DNEL-values

Substance:	CAS-No.:	DNEL/DMEL	Industry	Professional	consumer
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### PNEC-values

Substance:	CAS-No.:	PNEC	Worker, industry	Worker, professional	consumer
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## 8.1.3 Control-Banding

### Control-Banding

none

## 8.1.4 Additional information

EU: European Union

## 8.2 Exposure controls

### Occupational exposure controls

Technical measures and the application of adequate working methods take priority over the use of personal protection equipment.

### Chemical handling

Do not eat, drink, smoke or sneeze at the workplace. Wash hands before breaks and at the end of work. Apply skin care products after work. Wash contaminated clothing prior to re-use.

### Personal protection equipment

Only wear fitting, comfortable and clean protective clothing.

### Respiratory protection

Respiratory protection required in case of: aerosol or mist generation. Suitable respiratory protective equipment: filter respirator (full mask or mouth-piece) with filter:

### Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): DIN EN 374 Suitable material: PVC (Polyvinyl chloride). CR (polychloroprenes, Chloroprene rubber). NBR (Nitrile rubber). FKM (fluororubber). Butyl rubber.

### Eye protection

Tightly sealed safety glasses.

### Skin protection

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes). Only wear fitting, comfortable and clean protective clothing. Barrier creams are not substitutes for body protection.

### Environmental exposure controls

refer to chapter 7. No further action is necessary.

### Consumer exposure controls

refer to chapter 7. No further action is necessary.

## 8.3 Exposure scenario

none

## 9. Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

**State of matter:** liquid  
**Colour:** colourless  
**Odour:** odourless  
**Odour threshold:** none

#### Safety relevant basis data

	Parameter	Value	Unit	Remark
<b>Density:</b>	at °C: 20	1,3	g/cm <sup>3</sup>	
<b>Package density:</b>				not applicable
<b>pH:</b>	at °C: 20	< 0,5		
	at g/l: 100			
<b>Melting point / range:</b>		-8	°C	
<b>Boiling temperature / range:</b>		110	°C	
<b>Flash point:</b>				none/none
<b>Flammability:</b>				none/none
<b>Lower flammability limit:</b>				not applicable
<b>Upper flammability limit:</b>				not applicable
<b>Explosion hazard:</b>				not explosive.
<b>Lower explosion limit:</b>				not applicable
<b>Upper explosion limit:</b>				not applicable
<b>Ignition temperature:</b>				none/none
<b>Decomposition temperature:</b>				No data available
<b>Oxidizing characteristics:</b>				Not oxidizing.
<b>Vapour pressure:</b>	at °C: 20	2	hPa	
<b>Relative vapour density:</b>				No data available
<b>Speed of vaporization/evaporation rate:</b>				No data available
<b>Solubility in water:</b>				easily soluble.
<b>Fat solubility:</b>				No data available
<b>Solubility in log P O/W (n-octanol / water):</b>				not applicable
<b>Viscosity:</b>				No data available
<b>Solvent separation test:</b>				No data available
<b>Solvent content:</b>				No data available

## 9.2 Other information

none

## 10. Stability and reactivity

### 10.1 Reactivity

Corrosive to metals.

### 10.2 Chemical stability

With proper storage and handling the product is stable.

### 10.3 Possibility of hazardous reactions

In a watery solution and in contact with metals, product develops hydrogen .

### 10.4 Conditions to avoid

heat.

### 10.5 Incompatible materials

Alkalis (alkalis). metal. Oxidizing agents.

### 10.6 Hazardous decomposition products

Can be released in case of fire: Nitrogen oxides.

## 10.7 Additional information

none

## 11. Toxicological information

### 11.1 Information on toxicological effects

There are no data available on the mixture itself. Data apply to the principal component.

#### Acute toxicity

Substance:	CAS-No.:	Toxicological information
Nitric acid	7697-37-2	Acute toxicity, oral LD0: 430 mg/kg (Man. Human.) Acute toxicity, inhalation LC50: 28 mg/l/4 h (Rat.)

#### Specific symptoms in laboratory animals

none

### 11.2 Irritation and etching

#### Irritant effect on the skin

highly caustic.

#### Irritant effect on the eye

highly caustic.

#### Irritant effect on the respiratory tract

highly caustic.

#### Etching

Causes severe skin burns and eye damage.

### 11.3 Sensitization

No information available.

### 11.4 Repeated dose toxicity

No information available.

### 11.5 CMR effects

#### Carcinogenicity

No indications of human carcinogenicity exist.

#### Mutagenicity

No indications of human germ cell mutagenicity exist.

#### Reproductive toxicity

No indications of human reproductive toxicity exist.

### 11.6 General remarks

none

#### Practical experience

Following symptoms can occur: Corneal opacity. Coughing. shortage of breath. Abdominal pain.

#### Other observations

none

#### Additional information

none

## 12. Ecological information

## 12.1 Toxicity

There are no data available on the mixture itself. Ecological information refers to main component.

### Eco toxicity

Substance:	CAS-No.:	Ecotoxicity
Nitric acid	7697-37-2	Acute fish toxicity LC50: 72 mg/l/96 h (Western mosquitofish, [Gambusia affinis]) Acute daphnia toxicity EC50: 180 mg/l/48 h (Water flea [Daphnia magna])

## 12.2 Persistence and degradability

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

## 12.3 Bio accumulative potential

No indication of bio-accumulation potential.

## 12.4 Mobility in soil

If product enters soil, it will be mobile and may contaminate groundwater

## 12.5 Results of PBT and vPvB assessment

This substance does not meet the criteria for classification as PBT or vPvB.

## 12.6 Other adverse effects

none

## 12.7 Further ecological information

Do not empty into drains or the aquatic environment. Do not allow to enter into soil/subsoil.

## 12.8 Further details

The product leads to changes in the pH value of the test system. The result refers to an unneutralised sample.

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## 13. Disposal considerations

### 13.1 Waste treatment methods

#### Appropriate disposal/Product

Waste disposal according to EC Directives 75/442/EEC and 91/689/EEC on waste and hazardous waste in their latest versions.

#### Appropriate disposal/ packaging

Cleaned containers may be recycled. Handle contaminated packaging in the same way as the substance itself.

#### Control report for waste code/ waste marking according to EAKV

According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

**Waste key product:** 11 01 06 - acids not otherwise specified

**Waste key packaging:** 15 01 10 - packaging containing residues of or contaminated by dangerous substances

#### Remark

Waste disposal according to official state regulations.

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## 14. Transport information

### 14.1 Overland transport (ADR/RID)

**Proper Shipping name**

NITRIC ACID, SOLUTION

**UN No.:** 2031**Label:** 8**Packing Group:** II**Classification code:** C1**Remark:** Limited quantity (LQ): 1 L  
Tunnel restriction code: 2(E)

### 14.2 Transport by sea (IMDG)

**Proper Shipping name**

NITRIC ACID, SOLUTION

**UN-No.:** 2031**Label:** 8**Packing Group:** II**EmS-No:** F-A,S-B**MFAG:** -**Marine pollutant:** NO**Special Provisions:** Materials to avoid: Oxidizing agents. Organic peroxides Alkalis (alkalis). Keep away from food, drink and animal feedingstuffs.**Remark:** Limited quantity (LQ): 1 L

### 14.3 Air transport (ICAO-TI / IATA-DGR)

**Proper Shipping name**

NITRIC ACID, SOLUTION

**UN/ID-No.:** 2031**Label:** 8**Packing Group:** II**Remark:** Limited quantity (LQ): 1 L

### 14.4 Mail

Overland transport (ADR/RID)

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## 15. Regulatory information

### 15.1 Labelling

**Hazardous component(s) for labelling**

Nitric acid

**Special labelling of particular preparations**

Safety data sheet available for professional user on request.

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

**EU-Regulations****Directive 1999/13/EC on the limitation of emissions of volatile organic compounds (VOC-RL)**  
none**Regulation (EC) No 2037/2000 on substances that deplete the ozone layer**  
none**Regulation (EC) No 850/2004 on persistent organic pollutants**  
none**Regulation (EC) No 689/2008 concerning the export and import of dangerous chemicals**  
none**Regulation (EC) No 648/2004 (Detergents regulation)**

none

**Restrictions under Title VIII of Regulation (EC) No 1907/2006**

none

**National regulations**

Moreover, national legislation has to be observed!

**Informations on working limitations**

none

**Major Accidents Ordinance**

none

**Storage class according to VCI**

8 B Non-combustible corrosive substances.

**Water Hazard Class according to VwVwS**

1 weak water pollutant (WGK 1)

**Technical Instructions on Air Quality Control (TA-Luft)**

none

**Further regulations, limitations and legal requirements**

none

**15.3 Chemical safety assessment**

**For this preparation a chemical safety assessment has been carried out:** -

Chemical safety assessments for substances in this mixture were not carried out.

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**16. Other information****16.1 Wording of the H and R-phrases under paragraph 3****Regulation (EC) No 1272/2008**

290 May be corrosive to metals.

314 Causes severe skin burns and eye damage.

**Directive 67/548/EEC**

35 Causes severe burns.

**16.2 Training instructions**

none

**16.3 Recommended restrictions of use**

refer to chapter 1.

**16.4 Further remarks**

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.

**16.5 Documentation of changes**

none

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### **16.6 Data sources**

Data arise from reference works and literature.

### **16.7 Key and definition**

none

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## **17. Appendix**

### **17.1 Exposure scenario**

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