



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

1.1. Product identifier

Greinox P

Pickling paste

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

Relevant identified uses: Metal surface treatment products, including galvanic and electroplating products

Uses advised against: Other

1.3. Details of the supplier of the safety data sheet

Manufacturer

Kai Greising e. K. Clean Marker

Telephone: +49 (0) 7331 30 580

Telefax: +49 (0) 7331 981 722

Industriestrasse 29/2

D 73340 Amstetten

Supplier (manufacturer/importer/only representative/downstream user/distributor)

Kai Greising e. K. Clean Marker

Telephone: +49 (0) 7331 30 580

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Information contact

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E-mail (competent person): -

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

National contact

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Information telephone: +49 (0) 7331 30 580

Information telefax: +49 (0) 7331 981 722

E-mail (competent person): -

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

Dept. responsible for information:

Kai Greising e. K. Clean Marker

1.4. Emergency telephone number

Giftnotrufzentrale Freiburg

Telephone: +49 (0) 761 19 240

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008:

Acute Tox. 3; H301 , Acute Tox. 3; H311 , Acute Tox. 3; H331 , Skin Corr. 1B; H314 , Metal Cor. 1; H290

Directive 67/548/EEC:

T; R23 , T; R24 , T; R25 , C; R35 , Xi; R37

2.2. Label elements

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms:



GHS06,GHS05

Signal word:

Danger

Hazard statements:

290 May be corrosive to metals.
301 Toxic if swallowed.
311 Toxic in contact with skin.
314 Causes severe skin burns and eye damage.
331 Toxic if inhaled.

Precautionary statements:

280 Wear protective gloves/protective clothing/eye protection/face protection.
301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.
302+352 IF ON SKIN: Wash with plenty of water/soap.
304+340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
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+311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

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

Hazard symbols:



T Toxic.
C Corrosive.

R-phrases: 23/24/25 Toxic by inhalation, in contact with skin and if swallowed.

35 Causes severe burns.
37 Irritating to respiratory system.

S-phrases: 7/9 Keep container tightly closed and in a well-ventilated place.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
36/37 Wear suitable protective clothing and gloves.
45 In case of accident or if you feel unwell, seek medical advice immediately (show this label if possible).

2.3. Other hazards

Even in the case of a mere suspicion of poisoning a doctor must be consulted.

SECTION 3: Composition / information on ingredients

3.1. Substances

Greinox P is a mixture.

3.2. Mixtures

Greinox P contains following substances:

Composition/information on ingredients

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008(CLP):	Classification: 67/548/EEC:
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Nitric acid	231-714-2	7697-37-2	007-004-00-1		< 25 %	Ox. Sol. 2; H272 Skin Corr. 1B; H314	O; R8 C; R35
Hydrofluoric acid	231-634-8	7664-39-3	009-003-00-1		< 7 %	Acute Tox. 2; H330 Acute Tox. 1; H310 Acute Tox. 2; H300 Skin Corr. 1B; H314	T+; R26/27/28 C; R35

Substance with a common (EC) occupational exposure limit value

Substance:	EC-no.:	CAS-No.:	INDEX no.:	REACH-no.:	Concentration:	Classification: EC 1272/2008(CLP):	Classification: 67/548/EEC:
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(Full text of R-, H- and EUH-phrases: see section 16.)

Additional information

none

SECTION 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). Take off immediately all contaminated clothing.
- Following inhalation:** Move victim to fresh air. Put victim at rest and keep warm. In case of irregular breathing or respiratory arrest provide artificial respiration. Position and transport victim on their side. In case of respiratory distress, bring into semi-upright, seated position. Immediately get medical attention.
- Following skin contact:** After contact with skin, wash immediately with: Water. Immerse in cold water for a prolonged period. Immediately get medical attention.
- After 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 thoroughly with water. Let water be swallowed in little sips (dilution effect). Give activated carbon, in order to reduce the resorption in the gastro-enteric tract. Immediately get medical attention. No administration in cases of unconsciousness or cramps.

Self-protection of the first aider: First aid assistant: Pay attention to self-protection!

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

- Symptoms:** drowsiness. Dizziness.
- Nature of Hazard:** Depression of the central nervous system. shortage of breath. unconsciousness. Causes severe skin burns and eye damage.

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

- Notes for the doctor:** Rinse immediately carefully and thoroughly with eye-bath or water. Let water be swallowed in little sips (dilution effect).
- Special treatment:** First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

- Suitable extinguishing media:** Water fog. High power water jet. Carbon dioxide (CO₂). Foam. Dry extinguishing powder.
- Unsuitable extinguishing media:** none

5.2. Special hazards arising from the substance or mixture

Pyrolysis products, contains fluorine. Hydrogen fluoride. Nitrogen oxides (NOx).

5.3. Advice for firefighters

General information

Extinguishing materials should be selected according to the surrounding area. The product itself is not combustible. Use water spray/stream to protect personnel and to cool endangered containers. Move undamaged containers from immediate hazard area if it can be done safely.

Special protective equipment for firefighters:

In case of fire: Use acid-proof equipment only. Wear a self-contained breathing apparatus and chemical resistant suit.

Additional information

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protection equipment. Guide people to safety. Provide adequate ventilation. Keep away from unprotected people. Keep upwind.

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 material for containment and cleaning up

Remove mechanically, placing in appropriate containers for disposal. Treat the assimilated material according to the section on waste disposal. Avoid generation of dust. Clear contaminated area thoroughly. caustic soda. Wash with generous amount of water.

6.4. Reference to other sections

See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advices on safe handling

Use only in well-ventilated areas. In case of open handling equipment with built-in suction must be used. Avoid contact with skin and eyes.

Technical measures

Provide for sufficient ventilation and punctiform suction at critical points.

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

Ensure adequate ventilation of the storage area. Suitable material for floor covering: Material, acid proof. Provide for retaining containers, eg. floor pan without outflow.

Packaging materials

Keep/Store only in original container.

Requirements for storage rooms and vessels

Keep container tightly closed. Restrict access to stockrooms.

Hints on joint storage

Alkalis (alkalis). Oxidizing agents.

Storage class: 6.1 B Non-combustible toxic substances.

Further information on storage conditions

none

7.3. Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

occupational exposure limit value

Substance:	CAS-No.:	Source:	Occupational exposure limit value:	Limitation of exposure peaks:	Remark:
Nitric acid	7697-37-2	TRGS 900 (Salpetersäure 12/07)	1 ppm / 2,6 mg/m ³		EU
Hydrofluoric acid	7664-39-3	TRGS 900 (Fluorwasserstoff 12/07)	1 ppm / 0,83 mg/m ³	2(l)	DFG, EU, Y, H

Substance with a common (EC) occupational exposure limit value

Substance:	CAS-No.:	Source:	Occupational exposure limit value:	Limitation of exposure peaks:	Remark:
Nitric acid	7697-37-2	GESTIS International Limit Values (Nitric Acid 01/14)	1,3 mg/m ³		NL
Hydrofluoric acid	7664-39-3	GESTIS International Limit Values (Hydrogen fluoride 01/14)	1,8 ppm / 1,5 mg/m ³	3 ppm / 2,5 mg/m ³	UK

DNEL-/PNEC-values

DNEL value

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

PNEC Value

Substance:	CAS-No.:	PNEC	Worker, industry	Worker, professional	consumer

Risk management measures according to used control banding approach

none

Additional information

Y: A risk of reproductive effects needs not to be feared if the occupational exposure limit value (AGW) and the biological limit value (BGW) is kept

H: skin resorptive

8.2. Exposure controls

Occupational exposure controls

Provide for sufficient ventilation and punctiform suction at critical points. Technical measures and the

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

General protection and hygiene measures

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: insufficient ventilation. Suitable respiratory protective equipment: Combination filter device (DIN EN 141)..

Hand protection

Tested protective gloves are to be worn: German Industry Norms (DIN) / European Norms (EN): DIN EN 374 Suitable material: Butyl rubber. FKM (fluororubber). CR (polychloroprenes, Chloroprene rubber). PVC (Polyvinyl chloride). Breakthrough times and swelling characteristics of the material must be taken into consideration.

Eye/face protection

Tightly sealed safety glasses.

Body 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.

Exposure Scenario

none

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance

Physical state:	liquid
Colour:	colourless
Odour:	pungent
Odour threshold:	No data available

Safety relevant basis data

	parameter	unit	remark
Density:		1,2 g/cm ³	
Bulk density:			not applicable
pH:		< 0,5	
Melting point/freezing point:		-5 °C	
Initial boiling point and boiling range:		110 °C	
Flash point:			not applicable
Flammability (solid, gas):			not applicable
Explosivity:			not applicable
Lower explosion limit:			not applicable

Upper explosion limit:	not applicable	
Ignition temperature:	not applicable	
Decomposition temperature:	No data available	
Oxidizing potential:	not applicable	
Vapour pressure:	No data available	
Vapour density:	No data available	
Evaporation rate:	No data available	
Water solubility:	highly soluble.	
Fat solubility:	No data available	
Soluble in:	:	not applicable
Partition coefficient: n-octanol/water:	No data available	
Viscosity:	No data available	
Solvent separation test:	No data available	
Solvent content:	No data available	

9.2. Other information

none

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.

10.2. Chemical stability

Decomposition under formation of: nitrogen oxides (NO_x).

10.3. Possibility of hazardous reactions

Violent reaction with: Alkalis (alkalis). Oxidizing agents.

10.4. Conditions to avoid

heat. UV-radiation/sunlight.

10.5. Incompatible materials

metal. Alkalis (alkalis). Oxidizing agents.

10.6. Hazardous decomposition products

Pyrolysis products, contains fluorine. Hydrogen fluoride. Nitrogen oxides (NO_x).

Additional information

none

SECTION 11: Toxicological information

11.1. Information on toxicological effects

There are no data available on the mixture itself.

Acute toxicity

Substance:	CAS-No.:	Toxicological information
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Specific symptoms in laboratory animals

none

Irritation and etching

Irritant effect on the skin
corrosive.
Irritant effect on the eye
highly caustic.
Irritant effect on the respiratory tract
corrosive.
Additional information
Causes severe skin burns and eye damage.

Sensitization

no danger of sensitization.

Repeated dose toxicity (subacute, subchronic, chronic)

No information available.

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Carcinogenicity
No indications of human carcinogenicity exist.
Germ cell mutagenicity
No indications of human germ cell mutagenicity exist.
Reproductive toxicity
No indications of human reproductive toxicity exist.

General remarks

Even in the case of a mere suspicion of poisoning a doctor must be consulted.

Practical experience/human evidence

none

Other observations

none

Other information

none

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Ecotoxicity

Substance:	CAS-No.:	Ecotoxicity

12.2. Persistence and degradability

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

12.3. Bioaccumulative 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

Further ecological information

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

Further details

none

SECTION 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 / Package

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

List of proposed waste codes/waste designations in accordance with EWC

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

Waste code product: 11 01 05 - pickling acids

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

remark

Waste disposal according to official state regulations.

SECTION 14: Transport information

14.1. UN number

UN No.: 2922

14.2. UN proper shipping name

Official directive for the transport

Corrosive liquid, toxic, n.o.s.
Hydrofluoric acid, Nitric acid

Proper Shipping name

Corrosive liquid, toxic, n.o.s.
Hydrofluoric acid, Nitric acid

14.3. Transport hazard class(es)

Hazard label(s): 8+6.1

Classification code: CT1



14.4. Packing group

Packing group: II

14.5. Environmental hazards

Environmental hazards: ENVIRONMENTALLY HAZARDOUS

14.6. Special precautions for user

Land transport (ADR/RID)

Remark: none

Transport category: 2

Tunnel restriction code: E

Special provisions: 274

Limited quantity (LQ): 1 L

Sea transport (IMDG)

Special Provisions:

Remark: none

EmS-No: F-A, S-B **MFAG:** 8149 **Marine pollutant:** YES (p)

Special provisions: 274

Limited quantity (LQ): 1 L

UN proper shipping name

Remark: none

Limited quantity (LQ): 1 L

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

Remark: none

SECTION 15: Regulatory information

Labeling

Hazardous component(s) for labelling

Hydrofluoric acid; Nitric acid

Special labelling of particular preparations

Restricted to professional users. Safety data sheet available for professional user on request.

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

EU legislation

Information according to 1999/13/EC about limitation of emissions of volatile organic compounds (VOC-guideline).

none

Regulation (EC) No 2037/2000 concerning materials, which cause damage to the ozone layer.

none

Regulation (EC) No. 648/2004 (Detergents regulation)

none

National regulations

Observe in addition any national regulations!

Restrictions of occupation

Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers. Youths are only allowed to handle this product according to the regulation 94/33/EC, and as long as all effects of dangerous substances are prevented.

Storage class

6.1 B Non-combustible toxic substances.

Water hazard class (WGK)

2 water pollutant (WGK 2)

Other regulations, restrictions and prohibition regulations

none

15.2. 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.

SECTION 16: Other information

Relevant R-, H- and EUH-phrases (Number and full text)

Hazard statements

- 271 May cause fire or explosion; strong oxidizer.
- 300 Fatal if swallowed.
- 310 Fatal in contact with skin.
- 314 Causes severe skin burns and eye damage.
- 330 Fatal if inhaled.

R-phrases

- 8 Contact with combustible material may cause fire.
- 26/27/28 Very toxic by inhalation, in contact with skin and if swallowed.
- 35 Causes severe burns.

Training advice

Make sure that employees are aware of the intoxication risk. People wearing breathing apparatus must be appropriately trained.

Recommended restrictions of use

Reserved for industrial and professional use. The product should only be handled by persons over the age of 18, who were informed sufficiently about the dangerous nature of the product and about the necessary safety precautions.

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.

Documentation of changes

none

Key literature references and sources for data

Data arise from reference works and literature.

Abbreviations and acronyms

none