

# Safety Data Sheet

According to 1907/2006/EC, article 31

Issue: 3.1

Revision: 25.2.2016  
Printing date: 25.2.2016

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

### 1.1 Trade name:

# 8 kt Goldprobiersäure/Test acid for Gold

Restricted to professional users.

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

<b>Application of the substance / the preparation</b>	See trade name / according labelling under 1.1 Testing reagent for laboratory and precious metal trading
<b>Uses advised against of the substance / the preparation</b>	Others than like trade name all ways of spraying applications

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

#### Manufacturer / Supplier

SK-Chemie Stefan Köhler  
Vertrieb Chem.-Techn. Spezial-Produkte  
Stefan Köhler  
Bergweg 5

D-56340 Dachsenhausen

**Phone:** +49 (0) 6776 958 931

**Telefax:** +49 (0) 6776 958 932

**E-Mail:** info@skchemie.de

**Website:** http://www.skchemie.de

**te:**

### 1.4 Emergency telephone number

Poison Info Center of the University Mainz  
24 hours service. Languages: german/english

**Phone:** +49 (0) 6131 / 19240

### 1.5 Further information obtainable from

SK-Chemie Stefan Köhler, Contact data see above

## SECTION 2: Hazards information

### 2.1 Classification of the product/mixture according to Regulation (EC) No 1272/2006

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

### 2.2 Labelling of the product/mixture according to Regulation (EC) No 1272/2006

Hazard pictograms:



GHS05

**Signal word:** Danger

**Hazard statements:** H290 May be corrosive to metals.

H314 Causes severe skin burns and eye damage.

**Precautionary statements:** P280 Wear protective gloves/protective clothing/eye protection/face protection.

P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.

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

P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

## 2.3 Other hazards

Results of PBT- and vPvB assesment

PBT: not applicable.

vPvB: not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1 Chemical characterization

Mixture

### 3.2 Hazardous ingredients

Stoff:	EINECS:	CAS:	INDEX-No.:	REACH-No.:	Concentration:	Classification: EC 1272/2008(CLP):
Nitric acid	231-714-2	7697-37-2	007-004-00-1		25 - 50 %	Ox. Liq. 3; H272 Met. Corr. 1 H290 Skin Corr. 1A; H314

(Full text of H-phrases: see section 16.)

### 3.3 Additional informations

Contains no SVHC substances

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>General informations</b>	Remove any clothing soiled by the product immediately.
<b>After inhalation</b>	Fresh air or oxygen; seek medical advice. In case of unconsciousness place and transport in stable side position.
<b>After skin contact</b>	Remove any clothing soiled by the product immediately. Wash off with plenty of water. Seek medical advice.
<b>After eye contact</b>	After contact with the eyes, immediately rinse the open eyes 10 to 15 minutes under running water. Seek medical advice (oculist).
<b>After swallowing</b>	Give water to drink in small sips (dilution effect). No administration in cases of unconsciousness or convulsions. Do not induce vomiting. Seek medical advice.
<b>Self protection</b>	First responders: take care of self-protection

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

**Symptoms:** No further relevant information available.

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

No further relevant information available.

## SECTION 5: Firefighting measures

### 5.1 General informations

Extinguishing measures in accordance to the surrounding conditions. The product itself does not burn. To protect persons and to cool endangered containers using water spray. Remove undamaged containers from the danger zone if possible without risk.

### 5.2 Extinguishing media:

**suitable:** Water-spray, Carbon dioxide (CO<sub>2</sub>), foam, extinguishing powder

**Unsuitable:** Water with full jet

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

In case of fire, the following can be released: Nitrogen oxides (NO<sub>x</sub>).

### 5.4 Advice for firefighters

#### Protective equipment

Wear full protective suit with self-contained breathing apparatus.

#### Additional informations

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Wear protective equipment. Remove persons to safety. Keep away unprotected persons.

### 6.2 Environment precautions

Inform respective authorities in case of seepage into water courses or sewage system. Do not allow to enter sewers/surface or ground water.

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

Absorb with liquid-binding material (e.g. sand, fused silica, acid-binder, universal-binder). Contaminated material has to be disposed as waste (see section 13). Clean contaminated surface thoroughly.

### 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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Keep containers/bottles tightly closed. Open and handle container with care. Ensure good ventilation/exhausting at the workplace. Do not breathe vapours/aerosols. Avoid contact with eyes and skin.

#### Technical measures

Ensure good ventilation.

#### Information about fire- and explosion protections

Usual measures for preventive fire protection.

#### Additional information

None

### 7.2 Conditions for safe storage including any incompatibilities

#### Technical measures and conditions

Ensure good ventilation.

#### Packaging materials

Keep containers/bottles tightly closed. Use original containers/bottles only.

**Requirements to be met by storerooms and receptacles**

Store in cool, dry conditions. Observe official regulations on storage and handling of water hazardous substances.

**Information about storage in one common storage facility**

Keep away from combustible materials. Keep away from alkalis. Keep away from foodstuffs, beverages and feed.

**Further information about storage conditions**

Keep away from sources of ignition and heat.

**Storage class:** 8 B non flammable corrosiv substances

**7.3 Specific end use(s)**

See directions for use.

**SECTION 8: Exposure controls/personal protection****8.1 Control parameters****Ingredients with limit values that require monitoring at the workplace****Occupational exposure limits:**

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
Nitric acid	7697-37-2	GESTIS International Limit Values (Nitric acid)	1 ppm bzw. 2,6 mg/m <sup>3</sup>	-	EU: European Union 13,16

**Common exposure limits:**

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
-	-	-	-	-	-

Additional information: The lists valid during the making were used as basis.

**DNELs**

7697-37-2 nitric acid

Inhalative DNEL (worker) 1,3 mg/m<sup>3</sup> (Long-term-local-effects)

**\*8.2 Exposure controls****General protective and hygiene measures**

Technical measures and the application of suitable work processes should be given priority over the use of personal protective equipment.

The personal protective equipment must be defined depending on the quantities and concentration of hazardous substances in the workplace. ( Risk assessment )

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and the end of work. Store protective clothing separately. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

**Personal protective equipment**

Minimum standards for protective measures when handling working substances are listed in TRGS 500.

**Breathing equipment**

Continuously respected workplace exposure limits and other limits respiratory protection normally is not required.

Exceeding the minimum triggering level --> breathing filter apparatus

In case of brief exposure or low pollution use breathing filter apparatus. (Face mask according to DIN EN 136) with filter type E(P2) (DIN EN 14387). In case of intensive or longer exposure use breathing apparatus that is independent of circulating air (according DIN EN 137).

**Protection of hands**

The gloves must comply with DIN EN 374-3:2003.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves**

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

**Gloves for the permanent contact are suitable of the following materials:**

Recommended thickness:  $\geq 0.7$  mm Fluorocarbon rubber (Viton), Value for the permeation: Level  $\geq 480$  min

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

Recommended thickness:  $\geq 0.6$  mm Natural rubber (latex), Value for the permeation: Level  $\geq 120$  min

**Eye protection**

Tightly fitting safety glasses according DIN EN 166.

**Body protection**

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1 : 2006. If skin contact is possible, wear impenetrable protective clothing against this substance according DIN EN 13034:2005.

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1+2 : 2006.

**Environmental exposure controls**

see section 7. There are no further action is required.

**Consumer exposure control**

see section 7. There are no further action is required.

**8.3 Exposure scenario**

none

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

**Form:** liquid  
**Color:** Colourless – yellowish, clear  
**Odour:** pungent

**Safety relevant basic data**

	Parameter	Value	Unit	Remark
<b>Density:</b>	at 20°C	approx. 1,2	g/cm <sup>3</sup>	
<b>pH:</b>	undiluted	< 2		
<b>Melting point / -range:</b>				No data available
<b>Initial boiling point/boiling range</b>				No data available
<b>Flashpoint</b>				not applicable
<b>Ignition properties</b>				not applicable
Upper ignition limits				not applicable
Upper igniton limits				not applicable

**Explosiv properties**

Upper explosive limits

not explosive

Upper explosive limits

not applicable

**Auto-ignition temperature**

not applicable

**Decomposition temperature**

not applicable

**Oxidising properties**

No data available

**Vapour pressure**

No data available

**Vapour density**

No data available

**Evaporation rate**

No data available

**Solubility in water**

No data available

**Partition coefficient**

completely miscible

**n-octanol/water**

No data available

**Viscosity:**

No data available

**Value of solvents:****- organic solvents**

No data available

0,0 %

**9.2 Additional information**

No further relevant information available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Reaction with: Alkalis

**10.2 Chemical Stability**

No decomposition if used according to the specifications.

**10.3 Possibility of hazardous reactions**

Reaction with: Alkalis

Reacts with metals forming hydrogen.

**10.4 Conditions to avoid**

Heating

**10.5 Incompatible materials**

Hazardous decomposition in case of contact with incompatible substances as alkalis.

Reacts with metals forming hydrogen.

**10.6 Hazardous decomposition products**

In case of fire, the following can be released: Nitrogen oxides (NOx).

**10.7 Additional information**

No further relevant information available.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

No data available for the mixture.

**Acute Toxicity**

Substance:	CAS.:	Toxicological ngaben	
Nitric acid	7697-37-2	Acute Toxicity, inhalative LC50/4 h: 28 mg/l (rat)	Origin: IUCLID

## 11.2 Primary irritant effect

### On the skin

Caustic effect on skin and mucous membrans.

### On the eye

Strong caustic effect

### After inhalation

Caustic effect on skin and mucous membrans.

## 11.3 Sensitisation

No sensitizing effects known.

## 11.4 Toxicity at repeated exposure

Burns in mouth, throat, esophagus and gastrointestinal tract.

## 11.5 CMR-effects

### Carcinogenity

No effects known.

### Mutagenicity

No effects known.

### Reproductiv toxicity

No effects known.

## 11.6 General remarks

No further relevant information available.

### Practical experience

There is no information available.

### Other observations

There is no information available.

### Additional information

No further relevant information available.

## SECTION 12: Ecological information

### 12.1 Information on toxicological effects

No data available for the mixture.

#### Ecotoxicity

Substance:	CAS:	Ecotoxicity
Nitric acid	7697-37-2	Acute toxicity to crustacea LC50: 180 mg/l/48 h [Crangon crangon.]

Data is from the GESTIS substance database

### 12.2 Persistence and degradability

Methods of the determination of biodegradability are not applicable on inorganic substances.

### 12.3 Bioaccumulative potential

No further relevant information available

### 12.4 Mobility in soil

No further relevant information available

### 12.5 Results of PBT- and vPvB-assessment

Not applicable

## 12.6 Other adverse effects

Does not cause biological oxygen deficit.  
Harmful effect due to pH shift.

## 12.7 Additional ecological information

Do not allow product to reach ground water, water bodies or sewage system.

## 12.8 Additional information

Water hazard class 1 (German Regulation )(Self-assessment): slightly hazardous for water.

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# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

### Recommendation

Chemicals must be disposed of in compliance with the respective national regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

### Waste disposal key number

Since 01.01.1999 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

### Uncleaned packagings

Disposal must be made according to official regulations. Packagings that may not be cleansed are not to be disposed in the same manner as the product.

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# SECTION 14: Transport informations

## 14.1 UN-Number

ADR, IMDG, IATA      UN 3264

## 14.2 Proper shipping name

**ADR:** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

**IMDG:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

**IATA:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

## 14.3 Transport hazard class(es)

### ADR:

Class: 8 (C1) Corrosive substances

Label: 8

### IMDG, IATA:

Class: 8 Corrosive substances

Label: 8

## 14.4 Packaging group

ADR, IMDG, IATA:      II

## 14.5 Environmental hazards

Product contains environmental hazards: -

Marine pollutant:      no

Special marking (ADR): -

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#### 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 Marpol 73/78 and the IBC Code

Not applicable

#### 14.8 Additional information

##### ADR:

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code E2      Maximum quantity per inner packaging: 30 ml  
Maximum quantity per outer packaging: 500 ml

##### IMDG:

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code: E2      Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":**      UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(NITRIC ACID), 8, II

### SECTION 15: Regulatory information

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

##### EU-Regulations

**1999/13/EG on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations**

Not relevant

**2037/2000/EG on Substances which damage the ozone layer**

Not relevant

**850/2004/EG on Persistent Organic Pollutants**

Not relevant

**689/2008/EG on the export and import of dangerous chemicals**

Not relevant

**648/2004/EG on detergents**

Not relevant

**1907/2006/EG - Restrictions according title VIII of Regulation**

Not relevant

**98/2013/EG on the marketing and use of explosives precursors**

According to the regulation the product is subject to the restriction to hand over to private consumers

##### National regulations

Must be observed

##### Storage class according VCI (German guideline)

Class 8 B corrosive substances

##### Substances of very high concern (SVHC) according REACH, Article 57

Not relevant

## 15.2 Information about limitation of use

Employment restrictions concerning young persons must be observed.  
Restricted to professional users.

## 15.3 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other informations

### 16.1 Hazard statements under section 3

Complete wording of hazard statements and risk phrases (H-phrases) mentioned in section 3.  
These phrases refer to the constituents. The labelling for this product is stated in section 2.

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

### 16.2 Training advice

Users of breathing apparatus must be trained.

### 16.3 Recommended restriction(s) of application

See section 1.

### 16.4 Additional information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### \*16.5 Replacement documentaion

Replaces issue dated 14.7.2015 (issue 3)

### 16.6 Origin of datas

Information taken from reference works and literature as well as the instructions of the supplier.

### 16.7 Departement issuing MSDS

See section 1.5: SK-Chemie Stefan Köhler, Contact: Stefan Köhler

### 16.8 Abbreviations and acronymes

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
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 Harmonized System of Classification and Labelling of Chemicals  
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINECS: European List of Notified Chemical Substances  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
VCI: Verband der chemischen Industrie (German Chemical Industry Association, Germany)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted no-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
SVHC: Substance of Very High Concern  
PBT: Persistent, Bioakkumulierend, Toxisch

vPvB: very Persistent and very Bioaccumulative  
Ox. Liq. 3: Oxidising Liquids, Hazard Category 3  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Skin Corr. 1A: Skin corrosive/irritation, Hazard Category 1A

\* Data compared to the previous issue altered.

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# Safety Data Sheet

According to 1907/2006/EC, article 31

Issue: 3.1

Revision: 25.2.2016  
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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1 Trade name:

# 14 kt Goldprobiersäure/Test acid for Gold

Restricted to professional users.

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

<b>Application of the substance / the preparation</b>	See trade name / according labelling under 1.1 Testing reagent for laboratory and precious metal trading
<b>Uses advised against of the substance / the preparation</b>	Others than like trade name all ways of spraying applications

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

#### Manufacturer / Supplier

SK-Chemie Stefan Köhler  
Vertrieb Chem.-Techn. Spezial-Produkte  
Stefan Köhler  
Bergweg 5  
D-56340 Dachsenhausen

**Phone:** +49 (0) 6776 958 931  
**Telefax:** +49 (0) 6776 958 932  
**E-Mail:** info@skchemie.de  
**Webseite:** <http://www.skchemie.de>

### 1.4 Emergency telephone number

Poison Info Center of the University Mainz  
24 hours service. Languages: german/english

**Phone:** +49 (0) 6131 / 19240

### 1.5 Further information obtainable from

SK-Chemie Stefan Köhler, Contact data see above

## SECTION 2: Hazards information

### 2.1 Classification of the product/mixture according to Regulation (EC) No 1272/2006

Regulation (EC) No 1272/2008:  
Ox. Liq. 3; H272, Met. Corr. 1; H290, Skin Corr. 1A;

### 2.2 Labelling of the product/mixture according to Regulation (EC) No 1272/2006

Hazard pictograms:



GHS03 GHS05

**Signal word:** Danger

**Hazard statements:**  
H272 May intensify fire; oxidiser.  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

**Precautionary statements:**  
P280 Wear protective gloves/protective clothing/eye protection/face protection.  
P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower.  
P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3 Other hazards

Results of PBT- and vPvB assesment  
PBT: not applicable.  
vPvB: not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1 Chemical characterization

Mixture

### 3.2 Hazardous ingredients

Stoff:	EINECS:	CAS:	INDEX-No.:	REACH-No.:	Concentration:	Classification: EC 1272/2008(CLP):
Nitric acid	231-714-2	7697-37-2	007-004-00-1		> 50 %	Ox. Liq. 3; H272 Met. Corr. 1 H290 Skin Corr. 1A; H314

(Full text of H-phrases: see section 16.)

### 3.3 Additional informations

Contains no SVHC substances

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>General informations</b>	Remove any clothing soiled by the product immediately.
<b>After inhalation</b>	Fresh air or oxygen; seek medical advice. In case of unconsciousness place and transport in stable side position.
<b>After skin contact</b>	Remove any clothing soiled by the product immediately. Wash off with plenty of water. Seek medical advice.
<b>After eye contact</b>	After contact with the eyes, immediately rinse the open eyes 10 to 15 minutes under running water. Seek medical advice (oculist).
<b>After swallowing</b>	Give water to drink in small sips (dilution effect). No administration in cases of unconsciousness or convulsions. Do not induce vomiting. Seek medical advice.
<b>Self protection</b>	First responders: take care of self-protection

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

**Symptoms:** No further relevant information available.

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

No further relevant information available.

## SECTION 5: Firefighting measures

### 5.1 General informations

Extinguishing measures in accordance to the surrounding conditions. The product itself does not burn.  
To protect persons and to cool endangered containers using water spray. Remove undamaged containers from the danger zone if possible without risk.

### 5.2 Extinguishing media:

**suitable:** Water-spray, Carbon dioxid (CO<sub>2</sub>), foam, extinguishing powder  
**Unsuitable:** Water with full jet

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

In case of fire, the following can be released: Nitrogen oxides (NOx).  
Has fire promotion effect due to release of oxygen.

## 5.4 Advice for firefighters

### Protective equipment

Wear full protective suit with self-contained breathing apparatus.

### Additional informations

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Wear protective equipment. Remove persons to safety. Keep away unprotected persons. Do not inhale vapors/aerosols.

### 6.2 Environment precautions

Inform respective authorities in case of seepage into water courses or sewage system. Do not allow to enter sewers/surface or ground water.

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

Absorb with liquid-binding material (e.g. sand, fused silica, acid-binder, universal-binder). Contaminated material has to be disposed as waste (see section 13). Clean contaminated surface thoroughly.

### 6.4 Referenc 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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Keep containers/bottles tightly closed. Open and handle container with care. Ensure good ventilation/exhausting at the workplace. Do not inhale vapours/aerosols. Avoid contact with eyes and skin.

#### Technical measures

Ensure good ventilation.

#### Information about fire- and explosion protections

Usual measures for preventive fire protection.

#### Additional information

None

### 7.2 Conditions for safe storage including any incompatibilities

#### Technical measures and conditions

Ensure good ventilation.

#### Packaging materials

Keep containers/bottles tightly closed. Use original containers/bottles only.

#### Requirements to be met by storerooms and receptacles

Store in cool, dry conditions. Observe official regulations on storage and handling of water hazardous substances.

#### Information about storage in one common storage facility

Keep away from combustible materials. Keep away from alkalis. Keep away from foodstuffs, beverages and feed.

#### Further information about storage conditions

Keep away from sources of ignition and heat.

**Storage class:** 5.1 B oxidising substances

### 7.3 Specific end use(s)

See directions for use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with limit values that require monitoring at the workplace

##### Occupational exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
Nitric acid	7697-37-2	GESTIS International Limit Values (Nitric acid)	1 ppm bzw. 2,6 mg/m <sup>3</sup>	-	EU: European Union 13,16

##### Common exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
-	-	-	-	-	-

Additional information: The lists valid during the making were used as basis.

#### DNELs

7697-37-2 nitric acid

Inhalative DNEL (worker) 1,3 mg/m<sup>3</sup> (Long-term-local-effects)

### \*8.2 Exposure controls

#### General protective and hygiene measures

Technical measures and the application of suitable work processes should be given priority over the use of personal protective equipment.

The personal protective equipment must be defined depending on the quantities and concentration of hazardous substances in the workplace. ( Risk assessment )

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and the end of work. Store protective clothing separately. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

#### Personal protective equipment

Minimum standards for protective measures when handling working substances are listed in TRGS 500.

#### Breathing equipment

Continuously respected workplace exposure limits and other limits respiratory protection normally is not required.

Exceeding the minimum triggering level --> breathing filter apparatus

In case of brief exposure or low pollution use breathing filter apparatus. (Face mask according to DIN EN 136) with filter type E(P2) (DIN EN 14387). In case of intensive or longer exposure use breathing apparatus that is independent of circulating air (according DIN EN 137).

#### Protection of hands

The gloves must comply with DIN EN 374-3 : match of 2003.  
 The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.  
 Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.  
 Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

#### Material of gloves

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

#### Gloves for the permanent contact are suitable of the following materials:

Recommended thickness:  $\geq 0.7$  mm Fluorocarbon rubber (Viton), Value for the permeation: Level  $\geq 480$  min

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

Recommended thickness:  $\geq 0.6$  mm Natural rubber (latex), Value for the permeation: Level  $\geq 120$  min

#### Eye protection

Tightly fitting safety glasses according DIN EN 166.

#### Body protection

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1 : 2006. If skin contact is possible, wear impenetrable protective clothing against this substance according DIN EN 13034:2005.

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1+2 : 2006.

#### Environmental exposure controls

see section 7. There are no further action is required.

#### Consumer exposure control

see section 7. There are no further action is required.

### 8.3 Exposure scenario

none

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

**Form:** liquid  
**Color:** Colourless – yellowish, clear  
**Odour:** pungent

#### Safety relevant basic data

	Parameter	Value	Unit	Remark
<b>Density:</b>	at 20°C	approx. 1,4	g/cm <sup>3</sup>	
<b>pH:</b>	undiluted	< 2		
<b>Melting point / -range:</b>				No data available
<b>Initial boiling point/boiling range</b>				No data available
<b>Flashpoint</b>				not applicable
<b>Ignition properties:</b>				not applicable
Upper ignition limits				not applicable
Upper igniton limits				not applicable



**Explosiv properties**

Upper explosive limits

not explosive

Upper explosive limits

not applicable

**Auto-ignition temperature**

not applicable

**Decomposition temperature**

No data available

**Oxidising properties**

oxidising

**Vapour pressure**

No data available

**Vapour density**

No data available

**Evaporation rate**

No data available

**Solubility in water**

completely miscible

**Partition coefficient**

No data available

**n-octanol/water****Viscosity:**

No data available

**Value of solvents:****- organic solvents**

0,0 %

**9.2 Additional information**

No further relevant information available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Reaction with: Alkalis

**10.2 Chemical Stability**

No decomposition if used according to the specifications.

**10.3 Possibility of hazardous reactions**

Reaction with: Alkalis

Reacts with metals forming hydrogen.

**10.4 Conditions to avoid**

Heating

**10.5 Incompatible materials**

Hazardous decomposition in case of contact with incompatible substances as alkalis.

Reacts with metals forming hydrogen.

**10.6 Hazardous decomposition products**

In case of fire, the following can be released: Nitrogen oxides (NOx).

**10.7 Additional information**

No further relevant information available.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

No data available for the mixture.

**Acute Toxicity**

Substance:	CAS.:	Toxicological ngaben	
Nitric acid	7697-37-2	Acute Toxicity, inhalative LC50/4 h: 28 mg/l (rat)	Origin: IUCLID

## 11.2 Primary irritant effect

### On the skin

Caustic effect on skin and mucous membrans.

### On the eye

Strong caustic effect

### After inhalation

Caustic effect on skin and mucous membrans.

## 11.3 Sensitisation

No sensitizing effects known.

## 11.4 Toxicity at repeated exposure

Burns in mouth, throat, esophagus and gastrointestinal tract.

## 11.5 CMR-effects

### Carcinogenity

No effects known.

### Mutagenicity

No effects known.

### Reproductiv toxicity

No effects known.

## 11.6 General remarks

No further relevant information available.

### Practical experience

There is no information available.

### Other observations

There is no information available.

### Additional information

No further relevant information available.

## SECTION 12: Ecological information

### 12.1 Information on toxicological effects

No data available for the mixture.

#### Ecotoxicity

Substance:	CAS:	Ecotoxicity
Nitric acid	7697-37-2	Acute toxicity to crustacea LC50: 180 mg/l/48 h [Crangon crangon.]

Data is from the GESTIS substance database

### 12.2 Persistence and degradability

Methods of the determination of biodegradability are not applicable on inorganic substances.

### 12.3 Bioaccumulative potential

No further relevant information available

### 12.4 Mobility in soil

No further relevant information available

### 12.5 Results of PBT- and vPvB-assessment

Not applicable

### 12.6 Other adverse effects

Does not cause biological oxygen deficit.  
Harmful effect due to pH shift.

### 12.7 Additional ecological information

Do not allow product to reach ground water, water bodies or sewage system.

### 12.8 Additional information

Water hazard class 1 (German Regulation )(Self-assessment): slightly hazardous for water.

---

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Chemicals must be disposed of in compliance with the respective national regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

#### Waste disposal key number

Since 01.01.1999 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

#### Uncleaned packagings

Disposal must be made according to official regulations. Packagings that may not be cleansed are not to be disposed in the same manner as the product.

---

## SECTION 14: Transport informations

### 14.1 UN-Number

ADR, IMDG, IATA      UN 3093

### 14.2 Proper shipping name

**ADR:** 3093 CORROSIVE LIQUID, OXIDIZING, N.O.S. (NITRIC ACID)

**IMDG:** CORROSIVE LIQUID, OXIDIZING, N.O.S. (NITRIC ACID)

**IATA:** CORROSIVE LIQUID, OXIDIZING, N.O.S. (NITRIC ACID)

### 14.3 Transport hazard class(es)

#### ADR:

Class: 8 (CO1) Corrosive substances

Label: 8 + 5.1

#### IMDG, IATA:

Class: 8 Corrosive substances

Label: 8 + 5.1

### 14.4 Packaging group

ADR, IMDG, IATA:      II

### 14.5 Environmental hazards

Product contains environmental hazards: -

Marine pollutant:      no

Special marking (ADR): -

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#### 14.6 Special precautions for user

Warning: corrosive substances  
Danger code (Kemler): 85  
EMS-Number: F-A, S-B  
Segregation groups: Acids

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

Not applicable

#### 14.8 Additional information

**ADR:**

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code E2      Maximum quantity per inner packaging: 30 ml  
Maximum quantity per outer packaging: 500 ml

**IMDG:**

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code: E2      Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":**      UN3093 CORROSIVE LIQUID, OXIDIZING, N.O.S. (NITRIC ACID), 8 (5.1), II

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### SECTION 15: Regulatory information

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

**EU-Regulations**

**1999/13/EG on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations**

Not relevant

**2037/2000/EG on Substances which damage the ozone layer**

Not relevant

**850/2004/EG on Persistent Organic Pollutants**

Not relevant

**689/2008/EG on the export and import of dangerous chemicals**

Not relevant

**648/2004/EG on detergents**

Not relevant

**1907/2006/EG - Restrictions according title VIII of Regulation**

Not relevant

**98/2013/EG on the marketing and use of explosives precursors**

According to the regulation the product is subject to the restriction to hand over to private consumers

**National regulations**

Must be observed

**Storage class according VCI (German guideline)**

Class 5.1 B oxidising substances

**Substances of very high concern (SVHC) according REACH, Article 57**

Not relevant

## 15.2 Information about limitation of use

Employment restrictions concerning young persons must be observed.  
Restricted to professional users.

## 15.3 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other informations

### 16.1 Hazard statements under section 3

Complete wording of hazard statements and risk phrases (H-phrases) mentioned in section 3.  
These phrases refer to the constituents. The labelling for this product is stated in section 2.

H272 May intensify fire; oxidiser.  
H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

### 16.2 Training advice

Users of breathing apparatus must be trained.

### 16.3 Recommended restriction(s) of application

See section 1.

### 16.4 Additional information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### 16.5 Replacement documentaion

Replaces issue dated 14.7.2015 (Issue 3)

### 16.6 Origin of datas

Information taken from reference works and literature as well as the instructions of the supplier.

### 16.7 Departement issuing MSDS

See section 1.5: SK-Chemie Stefan Köhler, Contact: Stefan Köhler

### 16.8 Abbreviations and acronymes

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
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 Harmonized System of Classification and Labelling of Chemicals  
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINECS: European List of Notified Chemical Substances  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
VCI: Verband der chemischen Industrie (German Chemical Industry Association, Germany)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted no-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
SVHC: Substance of Very High Concern

PBT: **P**ersistent, **B**ioakkumulierend, **T**oxisch  
vPvB: very Persistent and very Bioaccumulative  
Ox. Liq. 3: Oxidising Liquids, Hazard Category 3  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Skin Corr. 1A: Skin corrosive/irritation, Hazard Category 1A

\* Data compared to the previous issue altered.

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# Safety Data Sheet

According to 1907/2006/EC, article 31

Issue: 3.1

Revision: 25.2.2016  
Printing date: 25.2.2016

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

### 1.1 Trade name:

# 18 kt Goldprobiersäure/Test acid for Gold

Restricted to professional users.

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

<b>Application of the substance / the preparation</b>	See trade name / according labelling under 1.1 Testing reagent for laboratory and precious metal trading
<b>Uses advised against of the substance / the preparation</b>	Others than like trade name all ways of spraying applications

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

#### Manufacturer / Supplier

SK-Chemie Stefan Köhler  
Vertrieb Chem.-Techn. Spezial-Produkte  
Stefan Köhler  
Bergweg 5  
D-56340 Dachsenhausen

**Phone:** +49 (0) 6776 958 931  
**Telefax:** +49 (0) 6776 958 932  
**E-Mail:** info@skchemie.de  
**Webseite:** <http://www.skchemie.de>

### 1.4 Emergency telephone number

Poison Info Center of the University Mainz  
24 hours service. Languages: german/english

**Phone:** +49 (0) 6131 / 19240

### 1.5 Further information obtainable from

SK-Chemie Stefan Köhler, Contact data see above

## SECTION 2: Hazards information

### 2.1 Classification of the product/mixture according to Regulation (EC) No 1272/2006

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

### 2.2 Labelling of the product/mixture according to Regulation (EC) No 1272/2006

Hazard pictograms:



GHS05

<b>Signal word:</b>	Danger
<b>Hazard statements:</b>	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
<b>Precautionary statements:</b>	P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3 Other hazards

Results of PBT- and vPvB assesment  
PBT: not applicable.  
vPvB: not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1 Chemical characterization

Mixture

### 3.2 Hazardous ingredients

Stoff:	EINECS:	CAS:	INDEX-No.:	REACH-No.:	Concentration:	Classification: EC 1272/2008(CLP):
Nitric acid	231-714-2	7697-37-2	007-004-00-1		25 - 50 %	Ox. Liq. 3; H272 Met. Corr. 1 H290 Skin Corr. 1A; H314

(Full text of H-phrases: see section 16.)

### 3.3 Additional informations

Contains no SVHC substances

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>General informations</b>	Remove any clothing soiled by the product immediately.
<b>After inhalation</b>	Fresh air or oxygen; seek medical advice. In case of unconsciousness place and transport in stable side position.
<b>After skin contact</b>	Remove any clothing soiled by the product immediately. Wash off with plenty of water. Seek medical advice.
<b>After eye contact</b>	After contact with the eyes, immediately rinse the open eyes 10 to 15 minutes under running water. Seek medical advice (oculist).
<b>After swallowing</b>	Give water to drink in small sips (dilution effect). No administration in cases of unconsciousness or convulsions. Do not induce vomiting. Seek medical advice.
<b>Self protection</b>	First responders: take care of self-protection

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

**Symptoms:** No further relevant information available.

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

No further relevant information available.

## SECTION 5: Firefighting measures

### 5.1 General informations

Extinguishing measures in accordance to the surrounding conditions. The product itself does not burn.  
To protect persons and to cool endangered containers using water spray. Remove undamaged containers from the danger zone if possible without risk.

### 5.2 Extinguishing media:

**suitable:** Water-spray, Carbon dioxid (CO2), foam, extinguishing powder  
**Unsuitable:** Water with full jet



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

In case of fire, the following can be released: Nitrogen oxides (NO<sub>x</sub>).

### 5.4 Advice for firefighters

#### Protective equipment

Wear full protective suit with self-contained breathing apparatus.

#### Additional informations

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Wear protective equipment. Remove persons to safety. Keep away unprotected persons.

### 6.2 Environment precautions

Inform respective authorities in case of seepage into water courses or sewage system. Do not allow to enter sewers/surface or ground water.

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

Absorb with liquid-binding material (e.g. sand, fused silica, acid-binder, universal-binder). Contaminated material has to be disposed as waste (see section 13). Clean contaminated surface thoroughly.

### 6.4 Referenco 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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Keep containers/bottles tightly closed. Open and handle container with care. Ensure good ventilation/exhausting at the workplace. Do not breathe vapours/aerosols. Avoid contact with eyes and skin.

#### Technical measures

Ensure good ventilation.

#### Information about fire- and explosion protections

Usual measures for preventive fire protection.

#### Additional information

None

### 7.2 Conditions for safe storage including any incompatibilities

#### Technical measures and conditions

Ensure good ventilation.

#### Packaging materials

Keep containers/bottles tightly closed. Use original containers/bottles only.

#### Requirements to be met by storerooms and receptacles

Store in cool, dry conditions. Observe official regulations on storage and handling of water hazardous substances.

#### Information about storage in one common storage facility

Keep away from combustible materials. Keep away from alkalis. Keep away from foodstuffs, beverages and feed.

#### Further information about storage conditions

Keep away from sources of ignition and heat.

**Storage class:** 8 B non flammable corrosiv substances

### 7.3 Specific end use(s)

See directions for use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with limit values that require monitoring at the workplace

##### Occupational exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
Nitric acid	7697-37-2	GESTIS International Limit Values (Nitric acid)	1 ppm bzw. 2,6 mg/m <sup>3</sup>	-	EU: European Union 13,16

##### Common exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
-	-	-	-	-	-

Additional information: The lists valid during the making were used as basis.

#### DNELs

7697-37-2 nitric acid

Inhalative DNEL (worker) 1,3 mg/m<sup>3</sup> (Long-term-local-effects)

### \*8.2 Exposure controls

#### General protective and hygiene measures

Technical measures and the application of suitable work processes should be given priority over the use of personal protective equipment.

The personal protective equipment must be defined depending on the quantities and concentration of hazardous substances in the workplace. ( Risk assessment )

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and the end of work. Store protective clothing separately. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

#### Personal protective equipment

Minimum standards for protective measures when handling working substances are listed in TRGS 500.

#### Breathing equipment

Continuously respected workplace exposure limits and other limits respiratory protection normally is not required.

Exceeding the minimum triggering level --> breathing filter apparatus

In case of brief exposure or low pollution use breathing filter apparatus. (Face mask according to DIN EN 136) with filter type E(P2) (DIN EN 14387). In case of intensive or longer exposure use breathing apparatus that is independent of circulating air (according DIN EN 137).

**Protection of hands**

The gloves must comply with DIN EN 374-3 : match of 2003.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves**

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

**Gloves for the permanent contact are suitable of the following materials:**

Recommended thickness:  $\geq 0.7$  mm Fluorocarbon rubber (Viton), Value for the permeation: Level  $\geq 480$  min

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

Recommended thickness:  $\geq 0.6$  mm Natural rubber (latex), Value for the permeation: Level  $\geq 120$  min

**Eye protection**

Tightly fitting safety glasses according DIN EN 166.

**Body protection**

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1 : 2006. If skin contact is possible, wear impenetrable protective clothing against this substance according DIN EN 13034:2005.

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1+2 : 2006.

**Environmental exposure controls**

see section 7. There are no further action is required.

**Consumer exposure control**

see section 7. There are no further action is required.

**8.3 Exposure scenario**

none

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

**Form:** liquid  
**Color:** Colourless – yellowish, clear  
**Odour:** pungent

**Safety relevant basic data**

	Parameter	Value	Unit	Remark
<b>Density:</b>	at 20°C	approx. 1,3	g/cm <sup>3</sup>	
<b>pH:</b>	undiluted	< 2		
<b>Melting point / -range:</b>				No data available
<b>Initial boiling point/boiling range</b>				No data available
<b>Flashpoint</b>				not applicable
<b>Ignition properties</b>				not applicable
Upper ignition limits				not applicable
Upper igniton limits				not applicable

**Explosiv properties**

Upper explosive limits

not explosive

Upper explosive limits

not applicable

**Auto-ignition temperature**

not applicable

**Decomposition temperature**

not applicable

**Oxidising properties**

No data available

**Vapour pressure**

No data available

**Vapour density**

No data available

**Evaporation rate**

No data available

**Solubility in water**

No data available

**Partition coefficient**

completely miscible

**n-octanol/water**

No data available

**Viscosity:**

No data available

**Value of solvents:****- organic solvents**

No data available

0,0 %

**9.2 Additional information**

No further relevant information available.

**SECTION 10: Stability and reactivity****10.1 Reactivity**

Reaction with: Alkalis

**10.2 Chemical Stability**

No decomposition if used according to the specifications.

**10.3 Possibility of hazardous reactions**

Reaction with: Alkalis

Reacts with metals forming hydrogen.

**10.4 Conditions to avoid**

Heating

**10.5 Incompatible materials**

Hazardous decomposition in case of contact with incompatible substances as alkalis.

Reacts with metals forming hydrogen.

**10.6 Hazardous decomposition products**

In case of fire, the following can be released: Nitrogen oxides (NOx).

**10.7 Additional information**

No further relevant information available.

**SECTION 11: Toxicological information****11.1 Information on toxicological effects**

No data available for the mixture.

**Acute Toxicity**

Substance:	CAS.:	Toxicological ngaben	
Nitric acid	7697-37-2	Acute Toxicity, inhalative LC50/4 h: 28 mg/l (rat)	Origin: IUCLID

## 11.2 Primary irritant effect

### On the skin

Caustic effect on skin and mucous membrans.

### On the eye

Strong caustic effect

### After inhalation

Caustic effect on skin and mucous membrans.

## 11.3 Sensitisation

No sensitizing effects known.

## 11.4 Toxicity at repeated exposure

Burns in mouth, throat, esophagus and gastrointestinal tract.

## 11.5 CMR-effects

### Carcinogenity

No effects known.

### Mutagenicity

No effects known.

### Reproductiv toxicity

No effects known.

## 11.6 General remarks

No further relevant information available.

### Practical experience

There is no information available.

### Other observations

There is no information available.

### Additional information

No further relevant information available.

## SECTION 12: Ecological information

### 12.1 Information on toxicological effects

No data available for the mixture.

#### Ecotoxicity

Substance:	CAS:	Ecotoxicity
Nitric acid	7697-37-2	Acute toxicity to crustacea LC50: 180 mg/l/48 h [Crangon crangon.]

Data is from the Gestis substance database

### 12.2 Persistence and degradability

Methods of the determination of biodegradability are not applicable on inorganic substances.

### 12.3 Bioaccumulative potential

No further relevant information available

### 12.4 Mobility in soil

No further relevant information available

### 12.5 Results of PBT- and vPvB-assessment

Not applicable

## 12.6 Other adverse effects

Does not cause biological oxygen deficit.  
Harmful effect due to pH shift.

## 12.7 Additional ecological information

Do not allow product to reach ground water, water bodies or sewage system.

## 12.8 Additional information

Water hazard class 1 (German Regulation )(Self-assessment): slightly hazardous for water.

---

# SECTION 13: Disposal considerations

## 13.1 Waste treatment methods

### Recommendation

Chemicals must be disposed of in compliance with the respective national regulations.  
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

### Waste disposal key number

Since 01.01.1999 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

### Uncleaned packagings

Disposal must be made according to official regulations. Packagings that may not be cleansed are not to be disposed in the same manner as the product.

---

# SECTION 14: Transport informations

## 14.1 UN-Number

ADR, IMDG, IATA      UN 3264

## 14.2 Proper shipping name

**ADR:** 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

**IMDG:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

**IATA:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID)

## 14.3 Transport hazard class(es)

### ADR:

Class: 8 (C1) Corrosive substances

Label: 8

### IMDG, IATA:

Class: 8 Corrosive substances

Label: 8

## 14.4 Packaging group

ADR, IMDG, IATA:      II

## 14.5 Environmental hazards

Product contains environmental hazards: -

Marine pollutant:      no

Special marking (ADR): -

---

#### 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 Marpol 73/78 and the IBC Code

Not applicable

#### 14.8 Additional information

##### ADR:

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code E2      Maximum quantity per inner packaging: 30 ml  
Maximum quantity per outer packaging: 500 ml

##### IMDG:

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code: E2      Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":**      UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(NITRIC ACID), 8, II

### SECTION 15: Regulatory information

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

##### EU-Regulations

**1999/13/EG on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations**

Not relevant

**2037/2000/EG on Substances which damage the ozone layer**

Not relevant

**850/2004/EG on Persistent Organic Pollutants**

Not relevant

**689/2008/EG on the export and import of dangerous chemicals**

Not relevant

**648/2004/EG on detergents**

Not relevant

**1907/2006/EG - Restrictions according title VIII of Regulation**

Not relevant

**98/2013/EG on the marketing and use of explosives precursors**

According to the regulation the product is subject to the restriction to hand over to private consumers

##### National regulations

Must be observed

##### Storage class according VCI (German guideline)

Class 8 B corrosive substances

##### Substances of very high concern (SVHC) according REACH, Article 57

Not relevant

## 15.2 Information about limitation of use

Employment restrictions concerning young persons must be observed.  
Restricted to professional users.

## 15.3 Chemical Safety Assessment

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other informations

### 16.1 Hazard statements under section 3

Complete wording of hazard statements and risk phrases (H-phrases) mentioned in section 3.  
These phrases refer to the constituents. The labelling for this product is stated in section 2.

H290 May be corrosive to metals.  
H314 Causes severe skin burns and eye damage.

### 16.2 Training advice

Users of breathing apparatus must be trained.

### 16.3 Recommended restriction(s) of application

See section 1.

### 16.4 Additional information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### \*16.5 Replacement documentaion

Replaces issue dated 14.7.2015 (issue 3)

### 16.6 Origin of datas

Information taken from reference works and literature as well as the instructions of the supplier.

### 16.7 Departement issuing MSDS

See section 1.5: SK-Chemie Stefan Köhler, Contact: Stefan Köhler

### 16.8 Abbreviations and acronymes

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
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 Harmonized System of Classification and Labelling of Chemicals  
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINECS: European List of Notified Chemical Substances  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
VCI: Verband der chemischen Industrie (German Chemical Industry Association, Germany)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted no-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
SVHC: Substance of Very High Concern  
PBT: Persistent, Bioakkumulierend, Toxisch



vPvB: very Persistent and very Bioaccumulative  
Ox. Liq. 3: Oxidising Liquids, Hazard Category 3  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Skin Corr. 1A: Skin corrosive/irritation, Hazard Category 1A

\* Data compared to the previous issue altered.

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# Safety Data Sheet

According to 1907/2006/EC, article 31

Issue: 3.1

Revision: 25.2.2016  
Printing date: 25.2.2016

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

### 1.1 Trade name:

# 21,6 kt Goldprobiersäure/Test acid for Gold

Restricted to professional users.

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

<b>Application of the substance / the preparation</b>	See trade name / according labelling under 1.1 Testing reagent for laboratory and precious metal trading
<b>Uses advised against of the substance / the preparation</b>	Others than like trade name all ways of spraying applications

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

#### Manufacturer / Supplier

SK-Chemie Stefan Köhler  
Vertrieb Chem.-Techn. Spezial-Produkte  
Stefan Köhler  
Bergweg 5  
D-56340 Dachsenhausen

**Phone:** +49 (0) 6776 958 931  
**Telefax:** +49 (0) 6776 958 932  
**E-Mail:** info@skchemie.de  
**Webseite:** <http://www.skchemie.de>

### 1.4 Emergency telephone number

Poison Info Center of the University Mainz  
24 hours service. Languages: german/english

**Phone:** +49 (0) 6131 / 19240

### 1.5 Further informations obtainable from

SK-Chemie Stefan Köhler, Contact data see above

## SECTION 2: Hazards information

### 2.1 Classification of the product/mixture according to Regulation (EC) No 1272/2006

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

### 2.2 Labelling of the product/mixture according to Regulation (EC) No 1272/2006

Hazard pictograms:



GHS05

<b>Signal word:</b>	Danger
<b>Hazard statements:</b>	H290 May be corrosive to metals. H314 Causes severe skin burns and eye damage.
<b>Precautionary statements:</b>	P280 Wear protective gloves/protective clothing/eye protection/face protection. P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting. P303+P361+P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

### 2.3 Other hazards

Results of PBT- and vPvB assesment  
PBT: not applicable.  
vPvB: not applicable.

## SECTION 3: Composition/information on ingredients

### 3.1 Chemical characterization

Mixture

### 3.2 Hazardous ingredients

Stoff:	EINECS:	CAS:	INDEX-No.:	REACH-No.:	Concentration:	Classification: EC 1272/2008(CLP):
Nitric acid	231-714-2	7697-37-2	007-004-00-1		25 - 50 %	Ox. Liq. 3; H272 Met. Corr. 1 H290 Skin Corr. 1A; H314
Hydrochloric acid	132-595-7	7647-01-0	017-002-01-X		1-5 %	Met. Corr. 1 H290 Skin Corr. 1A; H314 STOT SE 3, H335

(Full text of H-phrases: see section 16.)

### 3.3 Additional informations

Contains no SVHC substances

## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>General informations</b>	Remove any clothing soiled by the product immediately.
<b>After inhalation</b>	Fresh air or oxygen; seek medical advice. In case of unconsciousness place and transport in stable side position.
<b>After skin contact</b>	Remove any clothing soiled by the product immediately. Wash off with plenty of water. Seek medical advice.
<b>After eye contact</b>	After contact with the eyes, immediately rinse the open eyes 10 to 15 minutes under running water. Seek medical advice (oculist).
<b>After swallowing</b>	Give water to drink in small sips (dilution effect). No administration in cases of unconsciousness or convulsions. Do not induce vomiting. Seek medical advice.
<b>Self protection</b>	First responders: take care of self-protection

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

**Symptoms:** No further relevant information available.

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

No further relevant information available.

## SECTION 5: Firefighting measures

### 5.1 General informations

Extinguishing measures in accordance to the surrounding conditions. The product itself does not burn.

To protect persons and to cool endangered containers using water spray. Remove undamaged containers from the danger zone if possible without risk.

## 5.2 Extinguishing media:

**suitable:** Water-spray, Carbon dioxide (CO<sub>2</sub>), foam, extinguishing powder

**Unsuitable:** Water with full jet

## 5.3 Special hazards arising from the substance or mixture

In case of fire, the following can be released: Nitrogen oxides (NO<sub>x</sub>).

## 5.4 Advice for firefighters

### Protective equipment

Wear full protective suit with self-contained breathing apparatus.

### Additional informations

Collect contaminated fire fighting water separately. It must not enter the sewage system.

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## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Wear protective equipment. Remove persons to safety. Keep away unprotected persons.

### 6.2 Environment precautions

Inform respective authorities in case of seepage into water courses or sewage system. Do not allow to enter sewers/surface or ground water.

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

Absorb with liquid-binding material (e.g. sand, fused silica, acid-binder, universal-binder). Contaminated material has to be disposed as waste (see section 13). Clean contaminated surface thoroughly.

### 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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Keep containers/bottles tightly closed. Open and handle container with care. Ensure good ventilation/exhausting at the workplace. Do not breathe vapours/aerosols. Avoid contact with eyes and skin.

#### Technical measures

Ensure good ventilation.

#### Information about fire- and explosion protections

Usual measures for preventive fire protection.

#### Additional information

None

### 7.2 Conditions for safe storage including any incompatibilities

#### Technical measures and conditions

Ensure good ventilation.

### Packaging materials

Keep containers/bottles tightly closed. Use original containers/bottles only.

### Requirements to be met by storerooms and receptacles

Store in cool, dry conditions. Observe official regulations on storage and handling of water hazardous substances.

### Information about storage in one common storage facility

Keep away from combustible materials. Keep away from alkalis. Keep away from foodstuffs, beverages and feed.

### Further information about storage conditions

Keep away from sources of ignition and heat.

**Storage class:** 8 B non flammable corrosiv substances

## 7.3 Specific end use(s)

See directions for use.

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

#### Ingredients with limit values that require monitoring at the workplace

##### Occupational exposure limits:

Substance:	CAS:	Qrigin:	Occupational exposure limit value	Peak:	Remarks:
Nitric acid	7697-37-2	GESTIS International Limit Values (Nitric acid)	1 ppm bzw. 2,6 mg/m <sup>3</sup>	-	EU: European Union 13,16
Hydrochloric acid	7647-01-0	TRGS 900	3 mg/m <sup>3</sup> 2 ml/m <sup>3</sup>	Factor 2 Period 15 min, median, 4x/shift, distance 1h	DFG

##### Common exposure limits:

Substance:	CAS:	Qrigin:	Occupational exposure limit value	Peak:	Remarks:
-	-	-	-	-	-

Additional information: The lists valid during the making were used as basis.

### DNELs

7697-37-2 nitric acid

Inhalative DNEL (worker) 1,3 mg/m<sup>3</sup> (Long-term-local-effects)

7647-01-0 Hydrochloric acid

Inhalative DNEL (worker) 15 mg/m<sup>3</sup> (acute - local-effects)

Inhalative DNEL (worker) 8 mg/m<sup>3</sup> (Long-term-local-effects)

### \*8.2 Exposure controls

#### General protective and hygiene measures

Technical measures and the application of suitable work processes should be given priority over the use of personal protective equipment.

The personal protective equipment must be defined depending on the quantities and concentration of hazardous substances in the workplace. ( Risk assessment )

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and the end of work. Store protective clothing separately. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

**Personal protective equipment**

Minimum standards for protective measures when handling working substances are listed in TRGS 500.

**Breathing equipment**

Continuously respected workplace exposure limits and other limits respiratory protection normally is not required.

Exceeding the minimum triggering level --> breathing filter apparatus

In case of brief exposure or low pollution use breathing filter apparatus. (Face mask according to DIN EN 136) with filter type E(P2) (DIN EN 14387). In case of intensive or longer exposure use breathing apparatus that is independent of circulating air (according DIN EN 137).

**Protection of hands**

The gloves must comply with DIN EN 374-3 : match of 2003.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves**

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

**Gloves for the permanent contact are suitable of the following materials:**

Recommended thickness:  $\geq 0.7$  mm Fluorocarbon rubber (Viton), Value for the permeation: Level  $\geq 480$  min

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

Recommended thickness:  $\geq 0.6$  mm Natural rubber (latex), Value for the permeation: Level  $\geq 120$  min

**Eye protection**

Tightly fitting safety glasses according DIN EN 166.

**Body protection**

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1 : 2006. If skin contact is possible, wear impenetrable protective clothing against this substance according DIN EN 13034:2005.

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1+2 : 2006.

**Environmental exposure controls**

see section 7. There are no further action is required.

**Consumer exposure control**

see section 7. There are no further action is required.

**8.3 Exposure scenario**

none

## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

#### Appearance

<b>Form:</b>	liquid
<b>Color:</b>	Colourless – yellowish, clear
<b>Odour:</b>	pungent

#### Safety relevant basic data

Parameter	Value	Unit	Remark
<b>Density:</b>	at 20°C	approx. 1,3	g/cm <sup>3</sup>
<b>pH:</b>	undiluted	< 2	
<b>Melting point / -range:</b>			No data available
<b>Initial boiling point/boiling range</b>			No data available
<b>Flashpoint</b>			not applicable
<b>Ignition properties:</b>			not applicable
Upper ignition limits			not applicable
Upper igniton limits			not applicable
<b>Explosiv properties</b>			not explosive
Upper explosive limits			not applicable
Upper explosive limits			not applicable
<b>Auto-ignition temperature</b>			not applicable
<b>Decomposition temperature</b>			No data available
<b>Oxidising properties</b>			No data available
<b>Vapour pressure</b>			No data available
<b>Vapour density</b>			No data available
<b>Evaporation rate</b>			No data available
<b>Solubility in water</b>			completely miscible
<b>Partition coefficient</b>			No data available
<b>n-octanol/water</b>			
<b>Viscosity:</b>			No data available
<b>Value of solvents:</b>			
- organic solvents			0,0 %

### 9.2 Additional information

No further relevant information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Reaction with: Alkalis

### 10.2 Chemcal Stability

No decomposition if used according to the specifications.

### 10.3 Possibility of hazardous reactions

Reaction with: Alkalis

Reacts with metals forming hydrogen.

### 10.4 Conditions to avoid

Heating

### 10.5 Incompatible materials

Hazardous decomposition in case of contact with incompatible substances as alkalis.

Reacts with metals forming hydrogen.

## 10.6 Hazardous decomposition products

In case of fire, the following can be released: Nitrogen oxides (NOx).

## 10.7 Additional information

No further relevant information available.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

No data available for the mixture.

#### Acute Toxicity

Substance:	CAS.:	Toxilogical ngaben
Nitric acid	7697-37-2	Acute Toxicity, inhalative LC50/4 h: 28 mg/l (rat) Origin: IUCLID

### 11.2 Primary irritant effect

#### On the skin

Caustic effect on skin and mucous membrans.

#### On the eye

Strong caustic effect

#### After inhalation

Caustic effect on skin and mucous membrans.

### 11.3 Sensitisation

No sensitizing effects known.

### 11.4 Toxicity at repeated exposure

Burns in mouth, throat, esophagus and gastrointestinal tract.

### 11.5 CMR-effects

#### Carcinogenity

No effects known.

#### Mutagenicity

No effects known.

#### Reproductiv toxicity

No effects known.

### 11.6 General remarks

No further relevant information available.

#### Practical experience

There is no information available.

#### Other observations

There is no information available.

#### Additional information

No further relevant information available.

## SECTION 12: Ecological information

### 12.1 Information on toxicological effects



No data available for the mixture.

### Ecotoxicity

Substance:	CAS:	Ecotoxicity
Nitric acid	7697-37-2	Acute toxicity to crustacea LC50: 180 mg/l/48 h [Crangon crangon.]

Data is from the GESTIS substance database

### 12.2 Persistence and degradability

Methods of the determination of biodegradability are not applicable on inorganic substances.

### 12.3 Bioaccumulative potential

No further relevant information available

### 12.4 Mobility in soil

No further relevant information available

### 12.5 Results of PBT- and vPvB-assessment

Not applicable

### 12.6 Other adverse effects

Does not cause biological oxygen deficit.

Harmful effect due to pH shift.

### 12.7 Additional ecological information

Do not allow product to reach ground water, water bodies or sewage system.

### 12.8 Additional information

Water hazard class 1 (German Regulation )(Self-assessment): slightly hazardous for water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Chemicals must be disposed of in compliance with the respective national regulations.

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

#### Waste disposal key number

Since 01.01.1999 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

#### Uncleaned packagings

Disposal must be made according to official regulations. Packagings that may not be cleansed are not to be disposed in the same manner as the product.

## SECTION 14: Transport information

### 14.1 UN-Number

ADR, IMDG, IATA      UN 3264

### 14.2 Proper shipping name

ADR: 3264 CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, HYDROCHLORIC ACID)

IMDG: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, HYDROCHLORIC ACID)

**IATA:** CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (NITRIC ACID, HYDROCHLORIC ACID)

### 14.3 Transport hazard class(es)

**ADR:**

Class: 8 (C1) Corrosive substances

Label: 8

**IMDG, IATA:**

Class: 8 Corrosive substances

Label: 8

### 14.4 Packaging group

**ADR, IMDG, IATA:** II

### 14.5 Environmental hazards

Product contains environmental hazards: -

Marine pollutant: no

Special marking (ADR): -

### 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 Marpol 73/78 and the IBC Code

Not applicable

### 14.8 Additional information

**ADR:**

Limited quantities (LQ): 1 L

Expected quantities (EQ): Code E2

Maximum quantity per inner packaging: 30 ml

Maximum quantity per outer packaging: 500 ml

**IMDG:**

Limited quantities (LQ): 1 L

Expected quantities (EQ): Code: E2

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":**

UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.  
(NITRIC ACID, HYDROCHLORIC ACID), 8, II

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## SECTION 15: Regulatory information

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

**EU-Regulations**

**1999/13/EG on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations**

Not relevant

**2037/2000/EG on Substances which damage the ozone layer**

Not relevant

**850/2004/EG on Persistent Organic Pollutants**

Not relevant

**689/2008/EG on the export and import of dangerous chemicals**

Not relevant

**648/2004/EG on detergents**

Not relevant

**1907/2006/EG - Restrictions according title VIII of Regulation**

Not relevant

**98/2013/EG on the marketing and use of explosives precursors**

According to the regulation the product is subject to the restriction to hand over to private consumers

**National regulations**

Must be observed

**Storage class according VCI (German guideline)**

Class 8 B corrosive substances

**Substances of very high concern (SVHC) according REACH, Article 57**

Not relevant

**15.2 Information about limitation of use**

Employment restrictions concerning young persons must be observed.

Restricted to professional users.

**15.3 Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out.

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**SECTION 16: Other informations****16.1 Hazard statements under section 3**

Complete wording of hazard statements and risk phrases (H-phrases) mentioned in section 3.

These phrases refer to the constituents. The labelling for this product is stated in section 2.

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H314	Causes severe skin burns and eye damage.
H335	May cause respiratory irritation.

**16.2 Training advice**

Users of breathing apparatus must be trained.

**16.3 Recommended restriction(s) of application**

See section 1.

**16.4 Additional information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

**\*16.5 Replacement documentaion**

Replaces issue dated 14.7.2015 (Version 3)

**16.6 Origin of datas**

Information taken from reference works and literature as well as the instructions of the supplier.

## 16.7 Departement issuing MSDS

See section 1.5: SK-Chemie Stefan Köhler, Contact: Stefan Köhler

## 16.8 Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
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 Harmonized System of Classification and Labelling of Chemicals  
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINECS: European List of Notified Chemical Substances  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
VCI: Verband der chemischen Industrie (German Chemical Industry Association, Germany)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted no-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
SVHC: Substance of Very High Concern  
PBT: Persistent, Bioakkumulierend, Toxisch  
vPvB: very Persistent and very Bioaccumulative  
Ox. Liq. 3: Oxidising Liquids, Hazard Category 3  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Skin Corr. 1A: Skin corrosive/irritation, Hazard Category 1A  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3

\* Data compared to the previous issue altered.

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# Safety Data Sheet

According to 1907/2006/EC, article 31

Issue: 4.1

Revision: 25.2.2016  
Printing date: 25.2.2016

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

### 1.1 Trade name:

# Silberprobiersäure/Test acid for Silver

Restricted to professional users

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

<b>Application of the substance / the preparation</b>	See trade name / according labelling under 1.1 Testing reagent for laboratory and precious metal trading
<b>Uses advised against of the substance / the preparation</b>	others all ways of spraying applications

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

#### Manufacturer / Supplier

SK-Chemie Stefan Köhler  
Vertrieb Chem.-Techn. Spezial-Produkte  
Stefan Köhler  
Bergweg 5  
D-56340 Dachsenhausen

**Phone:** +49 (0) 6776 958 931  
**Telefax:** +49 (0) 6776 958 932  
**E-Mail:** [info@skchemie.de](mailto:info@skchemie.de)  
**Webseite:** <http://www.skchemie.de>

### 1.4 Emergency telephone number

Poison Info Center of the University Mainz  
24 hours service. Languages: german/english

**Phone:** +49 (0) 6131 / 19240

### 1.5 Further informations obtainable from

SK-Chemie Stefan Köhler, Contact data see above

## SECTION 2: Hazards information

### 2.1 Classification of the product/mixture according to Regulation (EC) No 1272/2006

Regulation (EC) No 1272/2008:

Ox. Liq. 3; H272, Met. Corr. 1; H290, Carc. 1B; H350, Muta 1B; H340, Repr. Cat. 1B; H360FD, Acute Tox. 3; H331, Acute Tox. 4; H302, STOT RE 1; H372, Skin Corr. 1A; H314, Resp. Sens. 1; H334, Stot. SE 3; H335, Aquatic Chronic. 1; H410

### 2.2 Labelling of the product/mixture according to Regulation (EC) No 1272/2006

Hazard pictograms:



<b>Signal word:</b>	GHS03, GHS05, GHS06, GHS08, GHS09 Danger
<b>Hazard statements:</b>	H272 May intensify fire; oxidiser. H290 May be corrosive to metals. H302 Harmful if swallowed. H314 Causes severe skin burns and eye damage. H331 Toxic if inhaled. H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Precautionary statements:**

H335 May cause respiratory irritation.  
 H340 May cause genetic defects.  
 H350 May cause cancer  
 H360FD May damage fertility or the unborn child  
 H372 Causes damage to organs through prolonged or repeated exposure  
 H410 Very toxic to aquatic life with long lasting effects.  
 P201 Obtain special instructions before use.  
 P260 Do not breathe vapours/spray.  
 P280 Wear protective gloves/protective clothing/eye protection/face protection.  
 P301+330+331 IF SWALLOWED: rinse mouth. Do NOT induce vomiting.  
 P304+341 IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing..  
 P305+351+338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing..  
 P308+313 IF exposed or concerned: Get medical advice/attention.  
 P501 Dispose of contents/container in accordance to local/regional/national/international regulations.

**2.3 Other hazards**

Results of PBT- and vPvB assesment

PBT: not applicable.

vPvB: not applicable.

**SECTION 3: Composition/information on ingredients****3.1 Chemical characterization**

Mixture of potassium dichromate and nitric acid

**3.2 Hazardous ingredients**

Stoff:	EINECS:	CAS:	INDEX-No.:	REACH-No.:	Concentration:	Classification: EC 1272/2008(CLP):
Nitric acid	231-714-2	7697-37-2	007-004-00-1		25 - 50 Gew.-%	Ox. Liq. 3; H272 Met. Corr. 1 H290 Skin Corr. 1A; H314
Potassium dichromate	231-906-6	7778-50-9	024-002-00-6		2,5 - 10 Gew.-%	Carc. 1B; H350 Muta 1B; H340 Repr. 1B; H360FD Ox. Sol. 2; H272 Acute Tox. 4; H312 Acute Tox. 3; H301 Acute Tox. 2; H330 Skin Corr. 1B; H314 Resp. Sens. 1; H334 Skin Sens. 1; H317 STOT RE 1; H372 Aquatic Acute 1; H400 Aquatic Chronic. 1; H410

(Full text of H-phrases: see section 16.)

**3.3 Additional informations**

SVHC: 7778-50-9 potassium dichromat

**SECTION 4: First aid measures**

#### 4.1 Description of first aid measures

<b>General informations</b>	Remove any clothing soiled by the product immediately. Symptoms of poisoning may occur after several hours; therefore medical observation for at least 48 hours after the accident. Remove breathing equipment only after removing contaminated clothing. In case of irregular breathing or respiratory arrest provide artificial respiration. In case of unconsciousness place and transport in stable side position.
<b>After inhalation</b>	Fresh air or oxygen; seek medical advice. In case of unconsciousness place and transport in stable side position.
<b>After skin contact</b>	Remove any clothing soiled by the product immediately. Wash off with plenty of water. Seek medical advice.
<b>After eye contact</b>	After contact with the eyes, immediately rinse the open eyes 10 to 15 minutes under running water. Seek medical advice (oculist).
<b>After swallowing</b>	Immediately rinse the mouth with water for several times without swallowing the water. Then let drink plenty of water. No administration in cases of unconsciousness or convulsions. Do not induce vomiting. Seek medical advice.
<b>Self protection</b>	First responders: take care of self-protection

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

**Symptoms:** Breathing difficulties, allergic reactions

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

No further relevant information available.

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### SECTION 5: Firefighting measures

#### 5.1 General informations

Extinguishing measures in accordance to the surrounding conditions. The product itself does not burn.  
To protect persons and to cool endangered containers using water spray. Remove undamaged containers from the danger zone if possible without risk.

#### 5.2 Extinguishing media:

**suitable:** Water-spray, Carbon dioxid (CO<sub>2</sub>), foam, extinguishing powder  
**Unsuitable:** Water with full jet

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

In case of fire, the following can be released: Nitrogen oxides (NO<sub>x</sub>).  
Has a fire-promoting effected due to release of oxygen.

#### 5.4 Advice for firefighters

**Protective equipment**  
Wear full protective suit with self-contained breathing apparatus.

#### **Additional informations**

Collect contaminated fire fighting water separately. It must not enter the sewage system

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### SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Wear protective equipment. Remove persons to safety. Keep away unprotected persons.

## 6.2 Environment precautions

Inform respective authorities in case of seepage into water courses or sewage system. Do not allow to enter sewers/surface or ground water.

## 6.3 Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, fused silica, acid-binder, universal-binder). Contaminated material has to be disposed as waste (see section 13). Avoid generations of dusts. Clean contaminated surface thoroughly. 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

### Advice on safe handling

Store locked up. Keep containers/bottles tightly closed. Open and handle container with care. Ensure good ventilation/exhausting at the workplace. Do not breathe vapours/aerosols. Avoid contact with eyes and skin.

### Technical measures

Ensure good ventilation.

### Information about fire- and explosion protections

Usual measures for preventive fire protection.

### Additional information

None

## 7.2 Conditions for safe storage including any incompatibilities

### Technical measures and conditions

Ensure good ventilation.

### Packaging materials

Keep containers/bottles tightly closed. Use original containers/bottles only.

### Requirements to be met by storerooms and receptacles

Store in cool, dry conditions. Observe official regulations on storage and handling of water hazardous substances.

### Information about storage in one common storage facility

Keep away from combustible materials. Keep away from foodstuffs, beverages and feed.

### Further information about storage conditions

Keep away from sources of ignition and heat.

**Storage class:** 6.1 B non flammable, toxic substances

## 7.3 Specific end use(s)

See directions for use.

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# SECTION 8: Exposure controls/personal protection

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## 8.1 Control parameters

### Ingredients with limit values that require monitoring at the workplace

#### Occupational exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
Nitric acid	7697-37-2	GESTIS International Limit Values (Nitric acid)	1 ppm bzw. 2,6 mg/m <sup>3</sup>	-	EU: European Union 13,16

#### Common exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
Potassium dichromate	7778-50-9	GESTIS International Limit Values (Potassium dichromate)	0,05 mg/m <sup>3</sup> Cr (ES) bzw. 0,005 mg/m <sup>3</sup> (SV)	0,015 mg/m <sup>3</sup> (SV)	ES: Spain. SV: Sweden.

Additional information: The lists valid during the making were used as basis.

#### DNELs

7697-37-2 nitric acid

Inhalative DNEL (worker) 1,3 mg/m<sup>3</sup> (Long-term-local-effects)

7778-50-9 potassium dichromate

Inhalative DNEL (worker) 0,028 mg/m<sup>3</sup> (Long-term-local-effects)

## \*8.2 Exposure controls

### General protective and hygiene measures

Technical measures and the application of suitable work processes should be given priority over the use of personal protective equipment.

The personal protective equipment must be defined depending on the quantities and concentration of hazardous substances in the workplace. ( Risk assessment )

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing. Wash hands before breaks and the end of work. Store protective clothing separately. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

### Personal protective equipment

Minimum standards for protective measures when handling working substances are listed in TRGS 500.

### Breathing equipment

Continuously respected workplace exposure limits and other limits respiratory protection normally is not required.

Exceeding the minimum triggering level --> breathing filter apparatus

In case of brief exposure or low pollution use breathing filter apparatus. (Face mask according to DIN EN 136) with filter type E(P2) (DIN EN 14387). In case of intensive or longer exposure use breathing apparatus that is independent of circulating air (according DIN EN 137).

### Protection of hands

The gloves must comply with DIN EN 374-3 : match of 2003.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

### 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.

**Eye protection**

Tightly fitting safety glasses according DIN EN 166.

**Body protection**

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1 : 2006. If skin contact is possible, wear impenetrable protective clothing against this substance according DIN EN 13034:2005.

Protective clothing in accordance with DIN EN 13688 : 2013. Chemical resistant safety shoes or boots according DIN EN 13832-1+2 : 2006.

**Environmental exposure controls**

see section 7. There are no further action is required.

**Consumer exposure control**

see section 7. There are no further action is required.

**8.3 Exposure scenario**

none

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

**Form:** liquid  
**Color:** orange clear  
**Odour:** pungent

**Safety relevant basic data**

	Parameter	Value	Unit	Remark
<b>Density:</b>	at °C: 20	approx. 1,3	g/cm <sup>3</sup>	
<b>pH:</b>	undiluted	< 2		
<b>Melting point / -range:</b>				No data available
<b>Initial boiling point/boiling range</b>				No data available
<b>Flashpoint</b>				not applicable
<b>Ignition properties:</b>				not applicable
Upper ignition limits				not applicable
Upper igniton limits				not applicable
<b>Explosiv properties</b>				not explosive
Upper explosive limits				not applicable
Upper explosive limits				not applicable
<b>Auto-ignition temperature</b>				not applicable
<b>Decomposition temperature</b>				No data available
<b>Oxidising properties</b>				oxidising
<b>Vapour pressure</b>				No data available
<b>Vapour density</b>				No data available
<b>Evaporation rate</b>				No data available
<b>Solubility in water</b>				completely miscible
<b>Partition coefficient</b>				No data available
<b>n-octanol/water</b>				
<b>Viscosity:</b>				No data available
<b>Value of solvents:</b>				
- organic solvents				0,0 %

**9.2 Additional information**

No further relevant information available.

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Reaction with: Alkalis, reduction agents

### 10.2 Chemical Stability

No decomposition if used according to the specifications .

### 10.3 Possibility of hazardous reactions

Reaction with: Alkalis, reduction agents  
Reacts with metals forming hydrogen.

### 10.4 Conditions to avoid

Heating

### 10.5 Incompatible materials

Hazardous decomposition in case of contact with incompatible substances as alkalis, reducing agents.  
Reacts with metals forming hydrogen.

### 10.6 Hazardous decomposition products

In case of fire, the following can be released: Nitrogen oxides (NOx).

### 10.7 Additional information

No further relevant information available.

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

No data available for the mixture.

#### Acute Toxicity

Substance:	CAS.:	Toxicological ngaben
Potassium dichromate	7778-50-9	Acute Toxicity, oral LD50: 90,5 - 168 mg/kg (rat)* Acute Toxicity, dermal LD50: 1170 mg/kg (rat) Acute Toxicity, inhalative LC50/4 h Aerosol: 0,083 – 0,099 mg/l (rat)* OECD 401 Origin: IUCLID OECD 403
Nitric acid	7697-37-2	Acute Toxicity, inhalative LC50/4 h: 28 mg/l (rat) Origin: IUCLID

\* Indication of External MSDS

### 11.2 Primary irritant effect

#### On the skin

Caustic effect on skin and mucous membrans.

#### On the eye

Strong caustic effect

#### After inhalation

Caustic effect on skin and mucous membrans.

### 11.3 Sensitisation

Sensitization possible by inhalation.

Sensitization possible by skin conatct.

### 11.4 Toxicity at repeated exposure

Frequent or prolonged contact may cause skin irritation.

**11.5 CMR-effects****Carcinogenity**

May cause cancer.

**Mutagenicity**

May cause genetic defects..

**Reproductiv toxicity**

May damage fertility or the unborn child.

**11.6 General remarks**

Even at a poisoning suspected medical examination is required.

**Practical experience**

There is no information available.

**Other observations**

There is no information available.

**Additional information**

here are no data on the preparation / mixture itself.

**SECTION 12: Ecological information****12.1 Information on toxicological effects**

No data available for the mixture.

**Ecotoxicity**

Substance:	CAS:	Ecotoxicity
Nitric acid	7697-37-2	Acute toxicity to crustacea LC50: 180 mg/l/48 h [Crangon crangon.]
Potassium dichromate	7778-50-9	Acute Fish toxicity LC50: 51,1 mg/l/96 h [Pimephales promelas.] Acute Fish toxicity LC50: 51,1 mg/l/96 h [Carassius auratus.] Acute Daphnientoxicity LC50: 7,18 mg/l/48 h [Daphnia magna.] Acute Daphnientoxicity EC50: 0,12 mg/l/48 h [Daphnia magna.] Toxicity to algae EC 50: 0,61 mg/l/72 h Toxicity to algae EC 50: 0,6 mg/l/96 h [Gracilaria tenuistipitata.]

Data is from the Gestis substance database

**12.2 Persistence and degradability**

Methods of the determination of biodegradability are not applicable on inorganic substances.

**12.3 Bioaccumulative potential**

No further relevant information available

**12.4 Mobility in soil**

No further relevant information available

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

Not applicable

**12.6 Other advers effects**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

Toxic for fish.

**12.7 Additional ecological information**

Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

**12.8 Additional information**

Water hazard class 3 (German regulation) (Self-assessment): extremely hazardous for water.

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

#### Recommendation

Chemicals must be disposed of in compliance with the respective national regulations.

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

#### Waste disposal key number

Since 01.01.1999 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

#### Uncleaned packagings

Disposal must be made according to official regulations.

## SECTION 14: Transport informations

### 14.1 UN-Number

ADR, IMDG, IATA      UN 2922

### 14.2 Proper shipping name

**ADR:** 2922 CORROSIV LIQUID, TOXIC, N.O.S. (NITRIC ACID, potassium dichromate)  
ENVIROMENTALLY HAZARDOUS

**IMDG:** CORROSIV LIQUID, TOXIC, N.O.S. (NITRIC ACID, potassium dichromate), MARINE  
POLLUTANT

**IATA:** CORROSIV LIQUID, TOXIC, N.O.S. (NITRIC ACID, potassium dichromate),

### 14.3 Transport hazard class(es)

#### ADR:

Class: 8 (CT1) Corrosive substances

Label: 8 + 6.1

#### IMDG, IATA:

Class: 8 Corrosive substances

Label: 8 + 6.1

### 14.4 Packaging group

ADR, IMDG, IATA:      II

### 14.5 Enviromental hazards

Product contains enviromental hazards: Potassium dichromate

Marine pollutant:      yes      Symbol (Fish and tree)

Special marking (ADR):      Symbol (Fish and tree)

### 14.6 Special precautions for user

Warning: corrosive substances

Danger code (Kemler): 86

EMS-Number: F-A, S-B

Segregation groups: Acids

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

Not applicable

### 14.8 Additional information

ADR:

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code E2 Maximum quantity per inner packaging: 30 ml  
Maximum quantity per outer packaging: 500 ml

**IMDG:**

Limited quantities (LQ): 1 L  
Expected quantities (EQ): Code: E2 Maximum net quantity per inner packaging: 30 ml  
Maximum net quantity per outer packaging: 500 ml

**UN "Model Regulation":** UN2922 CORROSIV LIQUID, TOXIC, N.O.S. (NITRIC ACID, potassium dichromate) ENVIROMENTALLY HAZARDOUS, 8 (6.1), II

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**SECTION 15: Regulatory information****\*15.1 Safety, health and enviromental regulations/legislation specific for the substance or mixture****EU-Regulations**

**1999/13/EG on the limitation of emissions of volatile organic compounds due to the use of organic solvents in certain activities and installations**

Not relevant

**2037/2000/EG on Substances which damage the ozone layer**

Not relevant

**850/2004/EG on Persistent Organic Pollutants**

Not relevant

**689/2008/EG on the export and import of dangerous chemicals**

Not relevant

**648/2004/EG on detergents**

Not relevant

**1907/2006/EG - Restrictions according title VIII of Regulation**

Not relevant

**98/2013/EG on the marketing and use of explosives precursors**

According to the regulation the product is subject to the restriction to hand over to private consumers

**National regulations**

Must be observed

**Storage class according VCI (German guideline)**

Class 6.1 B non flammable toxic substances

**Substances of very high concern (SVHC) according REACH, Article 57**

7778-50-9 Potassium dichromate

**15.2 Information about limitation of use**

Employment restrictions concerning young persons must be observed.

Employment restrictions concerning pregnant and nursing women must be observed.

Restricted to professional users.

**15.3 Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out.

## SECTION 16: Other informations

### 16.1 Hazard statements under section 3

Complete wording of hazard statements and risk phrases (H-phrases) mentioned in section 3. These phrases refer to the constituents. The labelling for this product is stated in section 2.

H272	May intensify fire; oxidiser.
H290	May be corrosive to metals.
H301	Toxic if swallowed.
H312	Harmful in contact with skin.
H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H330	Fatal if inhaled.
H334	May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H340	May cause genetic defects.
H350	May cause cancer.
H360FD	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated.
H400	Very toxic to aquatic life.
H410	May damage fertility or the unborn child.

### 16.2 Training advice

It is necessary to ensure that employees understand the toxicity hazard. Users of breathing apparatus must be trained.

### 16.3 Recommended restriction(s) of application

See section 1.

### 16.4 Additional information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### 16.5 Replacement documentaion

Replaces issue dated 14.7.2015 (Issue 4)

### 16.6 Origin of datas

Information taken from reference works and literature as well as the instructions of the supplier.

### 16.7 Departement issuing MSDS

See section 1.5: SK-Chemie Stefan Köhler, Contact: Stefan Köhler

### 16.8 Abbreviations and acronymes

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
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 Harmonized System of Classification and Labelling of Chemicals  
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINECS: European List of Notified Chemical Substances  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted no-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent

SVHC: Substance of Very High Concern  
PBT: Persistent, Bioakkumulierend, Toxisch  
vPvB: very Persistent and very Bioaccumulative  
Ox. Liq. 3: Oxidising Liquids, Hazard Category 3  
Ox. Sol. 2: Oxidising Solids, Hazard Category 2  
Met. Corr. 1: Corrosive to metals, Hazard Category 1  
Acute Tox. 2: Acute toxicity, Hazard Category 2  
Acute Tox. 3: Acute toxicity, Hazard Category 3  
Acute Tox. 4: Acute toxicity, Hazard Category 4  
Skin Corr. 1A: Skin corrosive/irritation, Hazard Category 1A  
Skin Corr. 1B: Skin corrosive/irritation, Hazard Category 1B  
Eye Dam. 1: Serious eye damage/irritation, Hazard Category 1  
Resp. Sens. 1: Sensitisation – Respiration, Hazard Category 1  
Skin Sens. 1: Skin – Sensitisation, Hazard Category 1  
Muta. 1B: Germ cell mutagenicity, Hazard Category 1  
Carc. 1B: Carcinogenicity, Hazard Category 1  
Repr. 1B: Reproductiv toxicity, Hazard Category 1  
STOT SE 3: Specific target organ toxicity - Single exposure, Hazard Category 3  
STOT RE 1: Specific target organ toxicity - Repeated exposure, Hazard Category 1  
Aquatic Acute 1: Hazardous to the aquatic environment – Acute Hazard, Category 1  
Aquatic Chronic 1: Hazardous to the aquatic environment – Chronic Hazard, Category 1  
Aquatic Chronic 2: Hazardous to the aquatic environment – Chronic Hazard, Category 2

\* Data compared to the previous issue altered.

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# Safety Data Sheet

According to 1907/2006/EC, article 31

Version: 4

Revision: 15.7.2015  
Printing date: 15.07.2015

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

### 1.1 Trade name:

**Kontrastol**

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

**Application of the substance / the preparation**      Care product for touchstones

**Uses advised against of the substance / the preparation**      All spraying applications

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

#### Manufacturer / Supplier

SK-Chemie Stefan Köhler  
Vertrieb Chem.-Techn. Spezial-Produkte  
Stefan Köhler  
Bergweg 5  
D-56340 Dachsenhausen

**Phone:** +49 (0) 6776 958 931  
**Telefax:** +49 (0) 6776 958 932  
**E-Mail:** [info@skchemie.de](mailto:info@skchemie.de)  
**Webseite:** <http://www.skchemie.de>

### 1.4 Emergency telephone number

Poison Info Center of the University Mainz  
24 hours service. Languages: German/English

**Phone:** +49 (0) 6131 / 19240

### 1.5 Further information obtainable from

SK-Chemie Stefan Köhler, Contact data see above

## SECTION 2: Hazards information

### 2.1 Classification of the product/mixture according to Regulation (EC) No 1272/2006

Regulation (EC) No 1272/2008:  
No classification/labelling according to the guideline

### 2.2 Labelling of the product/mixture according to Regulation (EC) No 1272/2006

**Hazard pictograms:**

**Signal word:** -  
**Hazard statements:** -  
**Precautionary statements:** -

### 2.3 Other hazards

Results of PBT- and vPvB assessment  
PBT: not applicable.  
vPvB: not applicable.

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## SECTION 3: Composition/information on ingredients

### 3.1 Chemical characterization

Mixture

### 3.2 Hazardous ingredients

Stoff:	EINECS:	CAS:	INDEX-No.:	REACH-No.:	Concentration:	Classification: EC 1272/2008(CLP):
White mineraloil	232-455-8	8042-47-5			> 50 Gew.-%	Asp. Tox.1, H304

(Full text of H-phrases: see section 16.)

### 3.3 Additional informations

Contains no SVHC substances

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## SECTION 4: First aid measures

### 4.1 Description of first aid measures

<b>General informations</b>	No special measures required. In case of unconscious, place and transport in stable side position.
<b>After inhalation</b>	Fresh air or oxygen; seek medical advice. In case of respiratory arrest or breathing irregularity artificial respiration or oxygen respiration and seek medical advice immediately. In case of unconsciousness place and transport in stable side position.
<b>After skin contact</b>	Remove any clothing soiled by the product immediately. Wash off with water and soap.
<b>After eye contact</b>	After contact with the eyes, immediately rinse the open eyes 10 to 15 minutes under running water. Seek medical advice (oculist) if necessary.
<b>After swallowing</b>	Do not induce vomiting. Seek medical advice. In case of unconscious, place and transport in stable side position. Seek medical advice immediately. Aspiration hazard if swallowed. Can get into the lungs and cause damage. Immediately contact a physician.
<b>Self protection</b>	For accidents after swallowing it can be dangerous for First responders to give mouth-to-mouth resuscitation.

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

**Symptoms:** No further relevant information available.

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

No further relevant information available.

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## SECTION 5: Firefighting measures

### 5.1 General informations

Extinguishing measures in accordance to the surrounding conditions. To protect persons and to cool

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endangered containers using water spray. Remove undamaged containers from the danger zone if possible without risk.

## 5.2 Extinguishing media:

**suitable:** Water-spray, Carbon dioxide (CO<sub>2</sub>), foam, extinguishing powder

**Unsuitable:** Water with full jet

## 5.3 Special hazards arising from the substance or mixture

In case of fire, the following can be released: Carbon oxides (CO, CO<sub>2</sub>).

## 5.4 Advice for firefighters

### Protective equipment

Wear full protective suit with self-contained breathing apparatus.

### Additional informations

No further relevant information available.

---

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Wear protective equipment. Remove persons to safety. Keep away unprotected persons. Use respiratory protective device against the effects of fumes / dust / aerosol.

### 6.2 Environment precautions

Inform respective authorities in case of seepage into water courses or sewage system. Do not allow to enter sewers/surface or ground water/ground or subsoil. Prevent from spreading (e.g. by damming-in or oil barriers).

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

Absorb with liquid-binding material (e.g. sand, fused silica, universal-binder). Contaminated material has to be disposed as waste (see section 13). Clean contaminated surface thoroughly.

### 6.4 Referenco 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

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## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

#### Advice on safe handling

Keep containers/bottles tightly closed. The usual good standards of industrial hygiene should be maintained. Avoid contact with eyes and skin.

#### Technical measures

Avoid misting.

#### Information about fire- and explosion protections

Usual measures for preventive fire protection.

#### Additional information

None

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## 7.2 Conditions for safe storage including any incompatibilities

### Technical measures and conditions

Ensure good ventilation.

### Packaging materials

Keep containers/bottles tightly closed. Use original containers/bottles only.

### Requirements to be met by storerooms and receptacles

Observe official regulations on storage and handling of water hazardous substances.

### Information about storage in one common storage facility

Keep away from strong oxidising materials.

### Further information about storage conditions

No further relevant information available.

**Storage class:** 10 (Flammable liquids unless the Storage Class 3) (German guideline)

## 7.3 Specific end use(s)

See directions for use.

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

### 8.1 Control parameters

#### Ingredients with limit values that require monitoring at the workplace

##### Occupational exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
-	-	-	-	-	-

##### Common exposure limits:

Substance:	CAS:	Origin:	Occupational exposure limit value	Peak:	Remarks:
-	-	-	-	-	-

Additional information: The lists valid during the making were used as basis.

### DNELs

8042-47-5 white mineral oil

Inhalative DNEL (worker) 160 mg/m<sup>3</sup>/8h (Long-term - systemic-effects)

Dermal DNEL (worker) 220 mg/kg/8h (Long-term - systemic-effects)

### 8.2 Exposure controls

#### General protective and hygiene measures

Keep away from foodstuffs, beverages and feed. Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and the end of work. Avoid contact with eyes and skin. Do not breathe vapours/aerosols.

#### Personal protective equipment

Minimum standards for protective measures when handling working substances are listed in TRGS 500.

#### Breathing equipment

During normal handling Kontrastol no oil mist/aerosol formation is given. Thus, no respiratory protection is required. In case of accidents or accidental oil mist/aerosol formation respiratory protection is required.

#### Protection of hands

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

Due to missing tests no recommendation to the glove material can be given for the product/ the

preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

**Material of gloves**

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

**Gloves for the permanent contact are suitable of the following materials:**

Recommended thickness:  $\geq 0.7$  mm Fluorocarbon rubber (Viton),  $\geq 0.5$  mm Polyvinylchloride (PVC)

Value for the permeation: Level  $\geq 480$  min

**Not suitable:** Natural rubber (latex)

**Eye protection**

Safety glasses recommended during refilling.

**Body protection**

Standard protective clothing at handling bigger quantities (oil resistant).

**Environmental exposure controls**

see section 7. There are no further action is required.

**Consumer exposure control**

see section 7. There are no further action is required.

**8.3 Exposure scenario**

none

**\*SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****Appearance**

**Form:** liquid  
**Color:** colourless, clear  
**Odour:** none

**Safety relevant basic data**

	Parameter	Value	Unit	Remark
<b>Density:</b>	at °C: 20	approx. 0,85	g/cm <sup>3</sup>	
<b>pH:</b>				not applicable
<b>Melting point / -range:</b>				No data available
<b>Initial boiling point/boiling range</b>				No data available
<b>Flashpoint</b>		> 100	°C	
<b>Ignition properties:</b>				not applicable
Upper ignition limits				not applicable
Upper igniton limits				not applicable
<b>Explosiv properties</b>				not explosive
Upper explosive limits		0,5	Vol.-%	
Upper explosive limits		6,5	Vol.-%	
<b>Auto-ignition temperature</b>				not applicable
<b>Decomposition temperature</b>				No data available
<b>Oxidising properties</b>				No data available
<b>Vapour pressure</b>				No data available
<b>Vapour density</b>				No data available
<b>Evaporation rate</b>				No data available
<b>Solubility in water</b>				not miscible
<b>Partition coefficient</b>				No data available
<b>n-octanol/water</b>				
<b>Viscosity:</b>	40°C	> 22	cst	Kinematic viscosity
<b>Value of solvents:</b>				
<b>- organic solvents</b>				0,0 %

**9.2 Additional information**

No further relevant information available.

**SECTION 10: Stability and reactivity**

### 10.1 Reactivity

Product is inert

### 10.2 Chemical Stability

Product is stable

### 10.3 Possibility of hazardous reactions

No further relevant information available.

### 10.4 Conditions to avoid

No further relevant information available.

### 10.5 Incompatible materials

No further relevant information available.

### 10.6 Hazardous decomposition products

In case of fire, the following can be released: Carbon oxides (CO, CO<sub>2</sub>).

### 10.7 Additional information

No further relevant information available.

## \*SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

No data available for the mixture.

#### Acute Toxicity

Substance:	CAS.:	Toxicological ngaben
White mineraloil	8012-95-1	Acute Toxicity, oral LD50: 24000 mg/l (rat) Origin: Gestis data base

### 11.2 Primary irritant effect

#### On the skin

No irritation on skin and mucous membrans.

#### On the eye

No irritation on eyes.

#### After inhalation

No irritation under normal conditions.

### 11.3 Sensitisation

No sensitizing effects known.

### 11.4 Toxicity at repeated exposure

No further relevant information available.

### 11.5 CMR-effects

#### Carcinogenity

No effects known.

#### Mutagenicity

No effects known.

#### Reproductiv toxicity

No effects known.

### 11.6 General remarks

No further relevant information available.

**Practical experience**

There is no information available.

**Other observations**

There is no information available.

**Additional information**

No further relevant information available.

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**SECTION 12: Ecological information****12.1 Information on toxicological effects**

No data available for the mixture.

**Ecotoxicity**

Substance:	CAS:	Ecotoxicity
-	-	-

**12.2 Persistence and degradability**

No relevant information available.

**12.3 Bioaccumulative potential**

No indication of bioaccumulation potential.

**12.4 Mobility in soil**

No relevant information available.

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

Not applicable

**12.6 Other adverse effects**

No relevant information available.

**12.7 Additional ecological information**

Do not allow product to enter ground water, water bodies or sewage system, ground or subsoil.

**12.8 Additional information**

Water hazard class 1 (German Regulation )(Self-assessment): slightly hazardous for water.

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**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Recommendation**

Chemicals must be disposed of in compliance with the respective national regulations.

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

**Waste disposal key number**

Since 01.01.1999 the waste code numbers have not only been product-related but are also essentially application-related. The valid waste code number of the application can be obtained from the European waste catalogue.

**Uncleaned packagings**



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Disposal must be made according to official regulations.

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## SECTION 14: Transport informations

### 14.1 UN-Number

ADR, IMDG, IATA no hazard goods according to the regulations

### 14.2 Proper shipping name

ADR: -  
IMDG: -  
IATA: -

### 14.3 Transport hazard class(es)

ADR:  
Class: -  
Label: -  
IMDG, IATA:  
Class: -  
Label: -

### 14.4 Packaging group

ADR, IMDG, IATA: -

### 14.5 Enviromental hazards

Product contains enviromental hazards: -  
Marine pollutant: no  
Special marking (ADR): -

### 14.6 Special precautions for user

Warning: -  
Danger code (Kemler): -  
EMS-Number: -  
Segregation groups: -

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

Not applicable

### 14.8 Additional information

ADR:  
Limited quantites (LQ): -  
Exepted quantities (EQ): -  
IMDG:  
Limited quantities (LQ): -  
Expected quantites (EQ): -

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## SECTION 15: Regulatory information

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

#### EU-Regulations

1999/13/EG  
No

2037/2000/EG

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No

**850/2004/EG**

No

**689/2008/EG**

No

**648/2004/EG**

No

**1907/2006/EG**

No

#### **National regulations**

Must be observed

#### **Storage class according VCI (German guideline)**

Class 10 (Flammable liquids unless the Storage Class 3)

#### **Substances of very high concern (SVHC) according REACH, Article 57**

no

### **15.2 Information about limitation of use**

no

### **15.3 Chemical Safety Assessment**

A Chemical Safety Assessment has not been carried out.

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## **SECTION 16: Other informations**

### **16.1 Hazard statements under section 3**

Complete wording of hazard statements and risk phrases (H-phrases) mentioned in section 3. These phrases refer to the constituents. The labelling for this product is stated in section 2.

H304 May be fatal if swallowed and enters airways.

### **16.2 Training advice**

Users of breathing apparatus must be trained.

### **16.3 Recommended restriction(s) of application**

See section 1.

### **16.4 Additional information**

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

### **16.5 Replacement documentaion**

Replaces issue dated 11.10.2012 (Version 3)

### **16.6 Origin of datas**

Information taken from reference works and literature as well as the manufacturer's instructions.

### **16.7 Departement issuing MSDS**

See section 1.5: SK-Chemie Stefan Köhler, Contact: Stefan Köhler

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## 16.8 Abbreviations and acronyms

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)  
ICAO: International Civil Aviation Organization  
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 Harmonized System of Classification and Labelling of Chemicals  
CLP: Classification, Labelling and Packaging (Regulation (EC) No. 1272/2008)  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINECS: European List of Notified Chemical Substances  
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)  
VCI: Verband der chemischen Industrie (German Chemical Industry Association, Germany)  
DNEL: Derived No-Effect Level (REACH)  
PNEC: Predicted no-Effect Concentration (REACH)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
SVHC: Substance of Very High Concern  
PBT: **P**ersistent, **B**ioakkumulierend, **T**oxisch  
vPvB: very Persistent and very Bioaccumulative  
Asp. Tox. 1: Aspiration hazard, Hazard Category 1

\* Data compared to the previous issue altered.

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