

Safety Data Sheet

According to 1907/2006/EC, article 31

Version: 1.1

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

1.1 Trade name:

Edelstahl Test/Stainless steel test

Restricted to professional users.

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

| | |
|--|---|
| Application of the substance / the preparation | See trade name / according labelling under 1.1 Testing reagent for laboratory and precious metal trading |
| Uses advised against of the substance / the preparation | 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 , Acute Tox. 4; H302 , Skin Corr. 1A; H314

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

Hazard pictograms:



GHS05 GHS07

Signal word: Danger

Hazard statements: H290 May be corrosive to metals.

H302 Harmful if swallowed.

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.

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

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

Aqueous mixture of substances listed below with nonhazardous additions.

3.2 Hazardous ingredients

| Stoff: | EINECS: | CAS: | INDEX-No.: | REACH-No.: | Concentration: | Classification: EC 1272/2008(CLP): |
|-------------------|-----------|-----------|------------|------------|----------------|--|
| Ferric trichlorid | 231-729-4 | 7705-08-0 | - | | 25 - 50 % | Met. Corr. 1 H290 Eye Dam. 1, H318 Skin Irrit. 2, H315 Acute Tox. 4, H302 |

(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

General informations Remove any clothing soiled by the product immediately.

After inhalation Fresh air or oxygen; seek medical advice.

In case of unconsciousness place and transport in stable side position.

After skin contact Remove any clothing soiled by the product immediately.

Wash off with plenty of water. Seek medical advice.

After eye contact After contact with the eyes, immediately rinse the open eyes 10 to 15 minutes under running water. Seek medical advice (oculist).

After swallowing Give water to drink in small sips (dilution effect). No administration in cases of unconsciousness or convulsions. Do not induce vomiting. Seek medical advice.

Self protection 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 (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: Hydrogen chloride (HCl)

Reacts with base metals with formation of flammable hydrogen gas.

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.

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 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

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. 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 (strong) alkalis. Keep away from foodstuffs, beverages and feed.

Further information about storage conditions

No further relevant information available.

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: |
|------------|------|---------|-----------------------------------|-------|----------|
| - | - | - | - | - | - |

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

No datas available

*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: ≥ 0.7 mm Butyl rubber, Value for the permeation: Level ≥ 480 min

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

Recommended thickness: ≥ 0.7 mm Butyl rubber, Value for the permeation: Level ≥ 480 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: | brown |
| Odour: | pungent |

Safety relevant basic data

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

No decomposition if used according to the specifications.

10.3 Possibility of hazardous reactions

Violent neutralization reactions with alkalis (caustic solutions) under heat emission.
Reacts with metals forming hydrogen.

10.4 Conditions to avoid

Heating

10.5 Incompatible materials

Base metals, alkalis, reducing agents

10.6 Hazardous decomposition products

In case of fire, the following can be released: Hydrogen chloride (HCl)

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 |
|-------------------|-----------|-------------------------------------|
| Ferric trichlorid | 7705-08-0 | Acute Toxicity, oral 450 mg/l (Rat) |

Origin: Gestis data base

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

No datas availabe

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 | 7705-08-0 | Acute toxicity to crustacea LC50/48 h: 33,4 mg/l median-value Acute toxicity to fish LC50/96 h: 21 mg/l median-value |

Origin: Gestis data base

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.

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. (FERRIC CHLORIDE, SOLUTION)

IMDG: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (FERRIC CHLORIDE, SOLUTION)

IATA: CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (FERRIC CHLORIDE, SOLUTION)

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: III

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): 5 L

Expected quantities (EQ): Code E1

Maximum quantity per inner packaging: 30 ml

Maximum quantity per outer packaging: 1000 ml

IMDG:

Limited quantities (LQ): 5 L

Expected quantities (EQ): Code: E1

Maximum net quantity per inner packaging: 30 ml

Maximum net quantity per outer packaging: 1000 ml

UN "Model Regulation":UN3264, CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S.
(FERRIC CHLORIDE, SOLUTION), 8, III

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

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.
H302 Harmful if swallowed.
H315 Causes skin irritation.
H318 Causes serious 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 23.7.2015 (Version 1)

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
Eye Dam. 1: Serious eye damage/eye irritation, Hazard Category 1
Met. Corr. 1: Corrosive to metals, Hazard Category 1
Skin Irrit. 2: Skin corrosion/irritation, Hazard Category 2
Acute Tox. 4: Acute toxicity, Hazard Category 4

* Data compared to the previous issue altered.