

Safety Data Sheet

according to Regulation (EC) No 1907/2006

Multiement-Standardlösung "Tht 625 - 28ZD" 14 Elemente in HNO₃/HCl/HF-Matrix

Revision date: 25.04.2024

Product code: 31703

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

1.1. Product identifier

Multiement-Standardlösung "Tht 625 - 28ZD" 14 Elemente in HNO₃/HCl/HF-Matrix

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

Use of the substance/mixture

Laboratory chemicals

Industrial uses: Uses of substances as such or in preparations at industrial sites

Professional uses: Public domain (administration, education, entertainment, services, craftsmen)

Uses advised against

Do not use for private purposes (household).

1.3. Details of the supplier of the safety data sheet

| | | |
|-------------------------|----------------------------------|------------------------------|
| Company name: | AnalytiChem GmbH | |
| | ACD | |
| Street: | Stempelstraße 6 | |
| Place: | D-47167 Duisburg | |
| Telephone: | 0203/5194-0 | Telefax: 0203/5194-290 |
| E-mail: | info@analytichem.de | |
| Contact person: | Abteilung Produktsicherheit | Telephone: 0203/5194-107/117 |
| E-mail: | produktsicherheit@analytichem.de | |
| Internet: | www.analytichem.de | |
| Responsible Department: | Abteilung Produktsicherheit | |

1.4. Emergency telephone

number:

For Hazardous Materials [or Dangerous Goods] Incidents Spill, Leak, Fire, Exposure, or Accident Call CHEMTREC Day or Night Within USA and Canada: 1-800-424-9300 Outside USA and Canada: +1 703-741-5970 (collect calls accepted)

Further Information

This product is a mixture. REACH Registration Number see section 3.

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008

Met. Corr. 1; H290
Acute Tox. 2; H330
Acute Tox. 3; H301
Acute Tox. 3; H311
Skin Corr. 1A; H314
Eye Dam. 1; H318
Carc. 1A; H350i
Aquatic Chronic 3; H412

Full text of hazard statements: see SECTION 16.

2.2. Label elements

Regulation (EC) No 1272/2008

Hazard components for labelling

hydrogen chloride

Hydrofluoric acid ... %

nickel monoxide

chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex

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Signal word: Danger

Pictograms:



Hazard statements

| | |
|-----------|--|
| H290 | May be corrosive to metals. |
| H330 | Fatal if inhaled. |
| H301+H311 | Toxic if swallowed or in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H350i | May cause cancer by inhalation. |
| H412 | Harmful to aquatic life with long lasting effects. |

Precautionary statements

| | |
|----------------|--|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection/hearing protection. |
| P303+P361+P353 | IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P310 | Immediately call a POISON CENTER/doctor. |

Special labelling of certain mixtures

| | |
|--------|---|
| EUH071 | Corrosive to the respiratory tract. |
| EUH208 | Contains nickel monoxide, chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex. May produce an allergic reaction. Restricted to professional users. |

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Mixtures in aqueous solution

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Relevant ingredients

| CAS No | Chemical name | | | Quantity |
|-----------|---|--------------|------------------|------------|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 7697-37-2 | nitric acid | | | 5 - < 10 % |
| | 231-714-2 | 007-030-00-3 | 01-2119487297-23 | |
| | Ox. Liq. 3, Met. Corr. 1, Acute Tox. 3, Skin Corr. 1A; H272 H290 H331 H314 EUH071 | | | |
| 7647-01-0 | Hydrochloric acid | | | 5 - < 10 % |
| | 231-595-7 | 017-002-01-X | 01-2119484862-27 | |
| | Skin Corr. 1B, STOT SE 3; H314 H335 | | | |
| 7664-39-3 | Hydrofluoric acid ... % | | | 1 - < 5 % |
| | 231-634-8 | 009-003-00-1 | 01-2119458860-33 | |
| | Acute Tox. 1, Acute Tox. 2, Acute Tox. 2, Skin Corr. 1A; H310 H330 H300 H314 | | | |
| 1313-99-1 | nickel monoxide | | | < 1 % |
| | 215-215-7 | 028-003-00-2 | | |
| | Carc. 1A, Skin Sens. 1, STOT RE 1, Aquatic Chronic 4; H350i H317 H372 H413 | | | |
| - | chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex | | | < 1 % |
| | - | 024-017-00-8 | | |
| | Carc. 1B, Skin Sens. 1, Aquatic Acute 1, Aquatic Chronic 1; H350i H317 H400 H410 | | | |

Full text of H and EUH statements: see section 16.

Specific Conc. Limits, M-factors and ATE

| CAS No | EC No | Chemical name | Quantity |
|-----------|-----------|--|------------|
| | | Specific Conc. Limits, M-factors and ATE | |
| 7697-37-2 | 231-714-2 | nitric acid | 5 - < 10 % |
| | | inhalation: ATE 2,65 mg/l (vapours) Ox. Liq. 3; H272: >= 65 - 100 Skin Corr. 1A; H314: >= 20 - 100 Skin Corr. 1B; H314: >= 5 - < 20 | |
| 7647-01-0 | 231-595-7 | Hydrochloric acid | 5 - < 10 % |
| | | Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100 | |
| 7664-39-3 | 231-634-8 | Hydrofluoric acid ... % | 1 - < 5 % |
| | | inhalation: ATE = 0,5 mg/l (vapours); inhalation: ATE = 0,05 mg/l (dusts or mists); inhalation: LC50 = 2240 ppm (gases); dermal: ATE = 5 mg/kg; oral: ATE = 5 mg/kg Skin Corr. 1A; H314: >= 7 - 100 Skin Corr. 1B; H314: >= 1 - < 7 Eye Irrit. 2; H319: >= 0,1 - < 1 | |

Further Information

This product does not contain substances of very high concern according to Regulation (EC) No 1907/2006 (REACH), Article 57 above the respective regulatory concentration limit of = 0.1 % (w/w).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

First aider: Pay attention to self-protection!

After inhalation

Provide fresh air.
Call a physician immediately.

After contact with skin

Wash immediately with: Water
Take off immediately all contaminated clothing and wash it before reuse.

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Call a physician immediately.

After contact with eyes

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

Remove contact lenses, if present and easy to do. Continue rinsing.

Protect uninjured eye.

After ingestion

Rinse mouth immediately and drink plenty of water.

Do NOT induce vomiting. Do not allow a neutralisation agent to be drunk.

Call a physician immediately.

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

Causes burns.

Irritant

Cough

Dyspnoea

Vomiting

Methaemoglobinaemia

Risk of serious damage to eyes.

Allergic reactions

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

No data available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Co-ordinate fire-fighting measures to the fire surroundings.

Unsuitable extinguishing media

no restriction

5.2. Special hazards arising from the substance or mixture

Non-combustible liquids

Hazardous combustion products

In case of fire may be liberated:

Nitrogen oxides (NO_x)

Hydrogen fluoride

Metal oxide smoke, toxic

Hydrochloric gas

5.3. Advice for firefighters

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

In case of fire and/or explosion do not breathe fumes.

Avoid contact with skin, eyes and clothes.

Additional information

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

Move undamaged containers from immediate hazard area if it can be done safely.

Use water spray jet to protect personnel and to cool endangered containers.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

General advice

Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation.

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Use personal protection equipment.
Avoid contact with skin, eyes and clothes.
Remove persons to safety.
Emergency procedures
Consult an expert
Do not breathe dust/fume/gas/mist/vapours/spray.

For emergency responders

Precautionary statements For emergency responders : Personal protection equipment: see section 8

6.2. Environmental precautions

Do not allow to enter into surface water or drains.

6.3. Methods and material for containment and cleaning up

For containment

Cover drains.
Prevent spread over a wide area (e.g. by containment or oil barriers).
Collect in closed and suitable containers for disposal.
Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

For cleaning up

Clean contaminated articles and floor according to the environmental legislation.

Other information

Provide adequate ventilation.
Do not breathe dust/fume/gas/mist/vapours/spray.
Wear breathing apparatus if exposed to vapours/dusts/aerosols.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Read label before use. Handle and open container with care.
When using do not eat, drink, smoke, sniff. Use personal protection equipment.
Provide adequate ventilation. Avoid contact with skin, eyes and clothes.
Do not breathe vapour/aerosol.

Advice on protection against fire and explosion

Usual measures for fire prevention.

Advice on general occupational hygiene

Keep away from food, drink and animal feedingstuffs. Remove contaminated, saturated clothing immediately.
Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat or drink. Avoid: aerosol or mist formation Do not breathe vapour/aerosol.

Further information on handling

Draw up and observe skin protection programme.
Wash hands and face before breaks and after work and take a shower if necessary.
Take off immediately all contaminated clothing and wash it before reuse.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Corrosive to metals.
Unsuitable container/equipment material: Metal Glass
The product develops hydrogen in an aqueous solution in contact with metals.

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Further information on storage conditions

Keep container tightly closed.

7.3. Specific end use(s)

Laboratory chemicals

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits

| CAS No | Substance | ppm | mg/m ³ | fib/cm ³ | Category | Origin |
|-----------|---------------------------------------|-----|-------------------|---------------------|---------------|--------|
| 7429-90-5 | Aluminium metal (Respirable Fraction) | - | 1 | | TWA (8 h) | |
| 7440-36-0 | Antimony | - | 0.5 | | TWA (8 h) | |
| 7440-50-8 | Copper, dusts and mists | - | 1 | | TWA (8 h) | |
| 7647-01-0 | Hydrogen chloride | 5 | 8 | | TWA (8 h) | |
| | | 10 | 15 | | STEL (15 min) | |
| 7664-39-3 | Hydrogen fluoride (as F) | 1.8 | 1.5 | | TWA (8 h) | |
| | | 3 | 2.5 | | STEL (15 min) | |
| 7697-37-2 | Nitric acid | 1 | 2.6 | | STEL (15 min) | |
| 7440-33-7 | Tungsten metal | - | 5 | | TWA (8 h) | |
| | | - | 10 | | STEL (15 min) | |

Biological limit values

| CAS No | Substance | Parameter | Value | Test material | Sampling time |
|-----------|-------------------|-----------|--------|---------------|---------------|
| 7664-39-3 | Hydrogen fluoride | Fluoride | 3 mg/L | Urine | End of shift |

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DNEL/DMEL values

| CAS No | Substance | Exposure route | Effect | Value |
|--------------------------|-------------------------|----------------|----------|------------------------|
| 7647-01-0 | Hydrochloric acid | | | |
| Worker DNEL, long-term | | inhalation | local | 8 mg/m ³ |
| Worker DNEL, acute | | inhalation | local | 15 mg/m ³ |
| Consumer DNEL, long-term | | inhalation | local | 8 mg/m ³ |
| Consumer DNEL, acute | | inhalation | local | 15 mg/m ³ |
| 7664-39-3 | Hydrofluoric acid ... % | | | |
| Worker DNEL, long-term | | inhalation | systemic | 1,5 mg/m ³ |
| Worker DNEL, acute | | inhalation | systemic | 2,5 mg/m ³ |
| Worker DNEL, long-term | | inhalation | local | 1,5 mg/m ³ |
| Worker DNEL, acute | | inhalation | local | 2,5 mg/m ³ |
| Consumer DNEL, long-term | | inhalation | systemic | 0,03 mg/m ³ |
| Consumer DNEL, acute | | inhalation | systemic | 0,03 mg/m ³ |
| Consumer DNEL, long-term | | inhalation | local | 0,2 mg/m ³ |
| Consumer DNEL, acute | | inhalation | local | 1,25 mg/m ³ |
| Consumer DNEL, long-term | | oral | systemic | 0,01 mg/kg bw/day |
| Consumer DNEL, acute | | oral | systemic | 0,01 mg/kg bw/day |

PNEC values

| CAS No | Substance | Value |
|--|-------------------------|-------------|
| 7664-39-3 | Hydrofluoric acid ... % | |
| Environmental compartment | | |
| Freshwater | | 0,89 mg/l |
| Marine water | | 0,089 mg/l |
| Freshwater sediment | | 3,38 mg/kg |
| Marine sediment | | 0,338 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | 51 mg/l |
| Soil | | 10,6 mg/kg |

8.2. Exposure controls

Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment.

If handled uncovered, arrangements with local exhaust ventilation have to be used.

Individual protection measures, such as personal protective equipment

Eye/face protection

goggles

Wear eye/face protection.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

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Protective gloves are recommended Company KCL GmbH, D-36124 Eichenzell, email: vertrieb@kcl.de With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 741 Dermatril® L
Recommended material: NBR (Nitrile rubber) 0,11 mm
Wearing time with occasional contact (splashes): > 480 min

The breakthrough times stated above were determined by KCL in laboratory tests acc. to EN374 with samples of the recommended glove types. This recommendation applies only to the product stated in the safety data sheet supplied by us and for the designated use. When dissolving in or mixing with other substances and under conditions deviating from those stated in EN374 please contact the supplier of CE-approved gloves (e.g. KCL GmbH, D-36124 Eichenzell, Internet: www.kcl.de).

Skin protection

Wear suitable protective clothing. Take off immediately all contaminated clothing.
Wash hands before breaks and after work.

The choice of body protection depends on the concentration and quantity of hazardous substances. The chemical resistance of protective agents must be clarified with their suppliers.

Respiratory protection

Wear breathing apparatus if exposed to vapours/dusts/aerosols.

The entrepreneur has to ensure that maintenance, cleaning and testing of respiratory protective devices are carried out according to the instructions of the producer. These measures have to be properly documented.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| | | |
|---|-------------------|---------------------|
| Physical state: | Liquid | |
| Colour: | clear | |
| Odour: | like: Nitric acid | |
| Melting point/freezing point: | | No data available |
| Boiling point or initial boiling point and boiling range: | | No data available |
| Flammability: | | No data available |
| Lower explosion limits: | | No data available |
| Upper explosion limits: | | No data available |
| Flash point: | | No data available |
| Auto-ignition temperature: | | No data available |
| Decomposition temperature: | | No data available |
| pH-Value: | | acidic |
| Viscosity / kinematic: | | No data available |
| Water solubility: | | completely miscible |
| Solubility in other solvents: | | |
| No data available | | |
| Partition coefficient n-octanol/water: | | No data available |

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| | |
|--------------------------|------------------------|
| Vapour pressure: | No data available |
| Vapour pressure: | No data available |
| Density: | 1,03 g/cm ³ |
| Bulk density: | No data available |
| Relative vapour density: | No data available |

9.2. Other information

Information with regard to physical hazard classes

| | |
|---------------------------|-------------------|
| Explosive properties | No data available |
| Sustaining combustion: | No data available |
| Self-ignition temperature | No data available |
| Solid: | No data available |
| Gas: | No data available |
| Oxidizing properties | |
| Oxidizing | |

Other safety characteristics

| | |
|--------------------------|-------------------|
| Evaporation rate: | No data available |
| Solvent separation test: | No data available |
| Solvent content: | 0 |
| Solid content: | 0 |
| Sublimation point: | No data available |
| Softening point: | No data available |
| Pour point: | No data available |
| No data available: | |
| Viscosity / dynamic: | No data available |
| Flow time: | No data available |

Further Information

Corrosive to metals.

SECTION 10: Stability and reactivity

10.1. Reactivity

Corrosive to metals.
Oxidising agent

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Alkali (lye)
The product develops hydrogen in an aqueous solution in contact with metals.
Amines, Ammonia, Alcohols, Alkali metals, Hydrogen peroxide
Copper, Combustible solids, Solvent, Alkaline earth metal, mercury (Hg).

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

Glass
Cellulose
Metal
The product develops hydrogen in an aqueous solution in contact with metals.

10.6. Hazardous decomposition products

In case of fire may be liberated:
SECTION 5: Firefighting measures

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Further information

No data available

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute toxicity

Fatal if inhaled.
Toxic if swallowed.
Toxic in contact with skin.

ATEmix calculated

ATE (oral) 250,0 mg/kg; ATE (dermal) 250,0 mg/kg; ATE (inhalation vapour) 16,67 mg/l; ATE (inhalation dust/mist) 1,923 mg/l

| CAS No | Chemical name | | | | |
|-----------|-------------------------|---------------|---------|---------------------|--------------------|
| | Exposure route | Dose | Species | Source | Method |
| 7697-37-2 | nitric acid | | | | |
| | inhalation vapour | ATE 2,65 mg/l | | | |
| 7664-39-3 | Hydrofluoric acid ... % | | | | |
| | oral | ATE 5 mg/kg | | | |
| | dermal | ATE 5 mg/kg | | | |
| | inhalation vapour | ATE 0,5 mg/l | | | |
| | inhalation dust/mist | ATE 0,05 mg/l | | | |
| | inhalation (1 h) gas | LC50 2240 ppm | Rat | Study report (1990) | OECD Guideline 403 |

Irritation and corrosivity

Skin corrosion/irritation: Causes severe skin burns and eye damage.
Serious eye damage/eye irritation: Causes serious eye damage.
Corrosive to the respiratory tract.
Following ingestion Gastric perforation
Irritating to respiratory system.
Pulmonary oedema
see also Section 4

Sensitising effects

Based on available data, the classification criteria are not met.
Contains nickel monoxide, chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

May cause cancer by inhalation. (nickel monoxide; chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex)
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

Based on available data, the classification criteria are not met.

Aspiration hazard

Based on available data, the classification criteria are not met.

Specific effects in experiment on an animal

There are no data available on the preparation/mixture itself.

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Additional information on tests

There are no data available on the preparation/mixture itself.

Practical experience

There are no data available on the preparation/mixture itself.

11.2. Information on other hazards

Other information

There are no data available on the preparation/mixture itself.

Further information

There are no data available on the preparation/mixture itself.

SECTION 12: Ecological information

12.1. Toxicity

| CAS No | Chemical name | | Dose | [h] [d] | Species | Source | Method |
|-----------|-------------------------|------------------|----------|-----------|--|---|--|
| 7697-37-2 | nitric acid | | | | | | |
| | Aquatic toxicity | | | | | | |
| | Acute fish toxicity | LC50 mg/l | 1559 | 96 h | Topeka shiner | Environmental Toxicology and Chemistry, | other: ASTM E729-26 |
| | Fish toxicity | NOEC | 268 mg/l | 30 d | juvenile Topeka shiner and with juvenile Fathead m | Study report (2009) | Growth tests estimated the test chemical |
| | Algae toxicity | NOEC mg/l | > 419 | 10 d | several benthic diatoms; see results | Marine Biology 43:307-315 (1977) | Ten cultures of benthic diatoms were iso |
| | Acute bacteria toxicity | EC50 mg/l () | > 1000 | 3 h | Activated sludge | Study report (2008) | OECD Guideline 209 |
| 7647-01-0 | Hydrochloric acid | | | | | | |
| | Acute fish toxicity | LC50 | 862 mg/l | 96 h | Leuciscus idus | | |
| 7664-39-3 | Hydrofluoric acid ... % | | | | | | |
| | Acute fish toxicity | LC50 | 299 mg/l | 96 h | Salmo trutta | REACH Registration Dossier | other: U.S Environmental Protection Agen |
| | Acute algae toxicity | ErC50 | 43 mg/l | 96 h | various algae species | REACH Registration Dossier | Methods not detailed in the review. |
| | Crustacea toxicity | NOEC | 3,7 mg/l | 21 d | Daphnia magna | REACH Registration Dossier | The publication is a review article of v |
| | Acute bacteria toxicity | EC50 mg/l () | 2930 | 3 h | Activated sludge | REACH Registration Dossier | ISO 8192 |

12.2. Persistence and degradability

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

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

BCF

| CAS No | Chemical name | BCF | Species | Source |
|-----------|-------------------------|---------|---------------|----------------------|
| 7664-39-3 | Hydrofluoric acid ... % | 53 - 58 | not specified | REACH Registration D |

12.4. Mobility in soil

There are no data available on the mixture itself.

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12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
There are no data available on the mixture itself.

12.6. Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Further information

Do not allow to enter into surface water or drains.
Discharge into the environment must be avoided.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Disposal recommendations

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.
Send to a physico-chemical treatment facility under observation of official regulations.

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.
Dispose of waste according to "Kreislaufwirtschafts- und Abfallgesetz (KrW-/AbfG)".

SECTION 14: Transport information

Land transport (ADR/RID)

| | |
|--|--|
| 14.1. UN number or ID number: | UN 2922 |
| 14.2. UN proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrochloric acid, Hydrofluoric acid) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | II |
| Hazard label: | 8+6.1 |
| Classification code: | CT1 |
| Special Provisions: | 274 |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |
| Transport category: | 2 |
| Hazard No: | 86 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

| | |
|--|--|
| 14.1. UN number or ID number: | UN 2922 |
| 14.2. UN proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrochloric acid, Hydrofluoric acid) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | II |
| Hazard label: | 8+6.1 |
| Classification code: | CT1 |
| Special Provisions: | 274 802 |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |

Marine transport (IMDG)

| | |
|---------------------------------------|--|
| 14.1. UN number or ID number: | UN 2922 |
| 14.2. UN proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrochloric acid, Hydrofluoric acid) |

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| | |
|--|----------|
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | II |
| Hazard label: | 8+6.1 |
| Special Provisions: | 274 |
| Limited quantity: | 1 L |
| Excepted quantity: | E2 |
| EmS: | F-A, S-B |

Air transport (ICAO-TI/IATA-DGR)

| | |
|--|--|
| 14.1. UN number or ID number: | UN 2922 |
| 14.2. UN proper shipping name: | CORROSIVE LIQUID, TOXIC, N.O.S. (Hydrochloric acid, Hydrofluoric acid) |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | II |
| Hazard label: | 8+6.1 |
| Special Provisions: | A3 A803 |
| Limited quantity Passenger: | 0.5 L |
| Passenger LQ: | Y840 |
| Excepted quantity: | E2 |
| IATA-packing instructions - Passenger: | 851 |
| IATA-max. quantity - Passenger: | 1 L |
| IATA-packing instructions - Cargo: | 855 |
| IATA-max. quantity - Cargo: | 30 L |

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

SECTION 15: Regulatory information

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

EU regulatory information

Authorisations (REACH, annex XIV):

chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 27, Entry 75

Marketing and use of explosives precursors (Regulation (EU) 2019/1148):

Acquisition, introduction, possession or use of this product by the general public is restricted by Regulation (EU) 2019/1148. All suspicious transactions, and significant disappearances and thefts should be reported to the relevant national contact point.

National regulatory information

Employment restrictions: Observe restrictions to employment for juveniles according to the 'juvenile work protection guideline' (94/33/EC).

Water hazard class (D): 2 - obviously hazardous to water

SECTION 16: Other information

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Abbreviations and acronyms

- Pyr. Sol: Pyrophoric solid
- Water-react: Substance and mixture which, in contact with water, emits flammable gas
- Ox. Liq: Oxidising liquid
- Met. Corr: Substance or mixture corrosive to metals
- Flam. Sol: Flammable solid
- Acute Tox: Acute toxicity
- Skin Corr: Skin corrosion
- Eye Dam: Eye damage
- Skin Sens: Skin sensitisation
- Carc: Carcinogenicity
- STOT SE: Specific target organ toxicity - single exposure
- STOT RE: Specific target organ toxicity - repeated exposure
- Aquatic Acute: Acute aquatic hazard
- Aquatic Chronic: Chronic aquatic hazard

Classification for mixtures and used evaluation method according to Regulation (EC) No 1272/2008 [CLP]

| Classification | Classification procedure |
|-------------------------|--------------------------|
| Met. Corr. 1; H290 | On basis of test data |
| Acute Tox. 2; H330 | |
| Acute Tox. 3; H301 | Calculation method |
| Acute Tox. 3; H311 | Calculation method |
| Skin Corr. 1A; H314 | Calculation method |
| Eye Dam. 1; H318 | Calculation method |
| Carc. 1A; H350i | Calculation method |
| Aquatic Chronic 3; H412 | Calculation method |

Relevant H and EUH statements (number and full text)

- H272 May intensify fire; oxidiser.
- H290 May be corrosive to metals.
- H300 Fatal if swallowed.
- H301 Toxic if swallowed.
- H301+H311 Toxic if swallowed or in contact with skin.
- H310 Fatal in contact with skin.
- H311 Toxic in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H330 Fatal if inhaled.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H350i May cause cancer by inhalation.
- H372 Causes damage to organs through prolonged or repeated exposure.
- H400 Very toxic to aquatic life.
- H410 Very toxic to aquatic life with long lasting effects.
- H412 Harmful to aquatic life with long lasting effects.
- H413 May cause long lasting harmful effects to aquatic life.
- EUH071 Corrosive to the respiratory tract.
- EUH208 Contains nickel monoxide, chromium (VI) compounds, with the exception of barium chromate and of compounds specified elsewhere in this Annex. May produce an allergic reaction.

Further Information

- Provide appropriate information, instructions and training to users
- The above information describes exclusively the safety requirements of the product and is based on our

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present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material. The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.

(The data for the relevant ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)