

AAS-Multielement-Standardlösung 6 Elemente in Salzsäure 0,5 mol/l

Revision: 12.04.2024

Product code: 32411

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SECTION 1: Identification of the substance/mixture and of the company/undertaking**1.1. Product identifier**

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UFI: SNRV-J2NF-D00P-AJ87

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

Reagents and laboratory chemicals

Only for laboratory and analysis purposes.

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

Skin Sens. 1; H317

Full text of hazard statements: see SECTION 16.

2.2. Label elements**Regulation (EC) No 1272/2008****Hazard components for labelling**

nickel dichloride

Signal word: Warning**Pictograms:****Hazard statements**

H290

May be corrosive to metals.

according to Regulation (EC) No 1907/2006

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H317 May cause an allergic skin reaction.

Precautionary statements

P261 Avoid breathing dust/fume/gas/mist/vapours/spray.
 P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection.
 P302+P352 IF ON SKIN: Wash with plenty of Water.
 P333+P313 If skin irritation or rash occurs: Get medical advice/attention.
 P362+P364 Take off contaminated clothing and wash it before reuse.

2.3. Other hazards

No data available

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

Mixtures in aqueous solution

Relevant ingredients

| CAS No | Chemical name | | | Quantity |
|------------|--|--------------|------------------|-----------|
| | EC No | Index No | REACH No | |
| | Classification (Regulation (EC) No 1272/2008) | | | |
| 7647-01-0 | Hydrochloric acid | | | 1 - < 5 % |
| | 231-595-7 | 017-002-01-X | 01-2119484862-27 | |
| | Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H290 H314 H318 H335 | | | |
| 10125-13-0 | Copper(II) chloride dihydrate | | | < 0.1 % |
| | | | 01-2119970306-36 | |
| | Acute Tox. 4, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Aquatic Acute 1, Aquatic Chronic 2; H312 H302 H315 H318 H400 H411 | | | |
| 7718-54-9 | nickel dichloride | | | < 0.1 % |
| | 231-743-0 | 028-011-00-6 | | |
| | Carc. 1A, Muta. 2, Repr. 1B, Acute Tox. 3, Acute Tox. 3, Skin Irrit. 2, Resp. Sens. 1, Skin Sens. 1, STOT RE 1, Aquatic Acute 1, Aquatic Chronic 1; H350i H341 H360D H331 H301 H315 H334 H317 H372 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 | |
| 7647-01-0 | 231-595-7 | Hydrochloric acid | 1 - < 5 % |
| | | Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100 | |
| 10125-13-0 | | Copper(II) chloride dihydrate | < 0.1 % |
| | | dermal: LD50 = > 2000 mg/kg; oral: LD50 = 584 mg/kg Aquatic Acute 1; H400: M=10 | |
| 7718-54-9 | 231-743-0 | nickel dichloride | < 0.1 % |
| | | inhalation: ATE = 3 mg/l (vapours); inhalation: ATE = 0,5 mg/l (dusts or mists); oral: LD50 = 500 mg/kg Skin Irrit. 2; H315: >= 20 - 100 Skin Sens. 1; H317: >= 0,01 - 100 STOT RE 1; H372: >= 1 - 100 STOT RE 2; H373: >= 0,1 - < 1 Aquatic Acute 1; H400: M=1 Aquatic Chronic 1; H410: M=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).

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SECTION 4: First aid measures**4.1. Description of first aid measures****General information**

No data available

After inhalation

Provide fresh air.

Call a doctor if you feel unwell.

After contact with skin

Wash immediately with: Water

Take off immediately all contaminated clothing and wash it before reuse.

In case of skin irritation, consult a physician.

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

Irritant

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:

Hydrogen chloride (HCl)

Metal oxide smoke, toxic

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

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6.1. Personal precautions, protective equipment and emergency procedures**General advice**

Corrosive to metals.

For non-emergency personnel

Provide adequate ventilation.

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.

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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

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

Hints on joint storage

national regulations

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 |
|-----------|---|-----|-------------------|---------------------|---------------|--------|
| 7647-01-0 | Hydrogen chloride | 5 | 8 | | TWA (8 h) | |
| | | 10 | 15 | | STEL (15 min) | |
| - | Nickel inorganic compounds (as Ni), respirable fraction | - | 0,01 | | TWA (8 h) | |

Biological limit values

| CAS No | Substance | Parameter | Value | Test material | Sampling time |
|--------|------------------|-----------|--------|---------------|--|
| - | Nickel compounds | Ni | 3 µg/L | Urine | After several consecutive working shifts |

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DNEL/DMEL values

| CAS No | Substance | | | |
|--------------------------|-------------------|----------------|----------|--------------------|
| DNEL type | | Exposure route | Effect | Value |
| 7647-01-0 | Hydrochloric acid | | | |
| Worker DNEL, long-term | | inhalation | local | 8 mg/m³ |
| Worker DNEL, acute | | inhalation | local | 15 mg/m³ |
| Consumer DNEL, long-term | | inhalation | local | 8 mg/m³ |
| Consumer DNEL, acute | | inhalation | local | 15 mg/m³ |
| 7718-54-9 | nickel dichloride | | | |
| Worker DNEL, acute | | inhalation | local | 1,6 mg/m³ |
| Consumer DNEL, acute | | inhalation | systemic | 8,8 mg/m³ |
| Consumer DNEL, acute | | inhalation | local | 0,1 mg/m³ |
| Worker DNEL, acute | | inhalation | systemic | 104 mg/m³ |
| Consumer DNEL, long-term | | oral | systemic | 0,02 mg/kg bw/day |
| Consumer DNEL, acute | | oral | systemic | 0,012 mg/kg bw/day |

PNEC values

| CAS No | Substance | | Value |
|--|-------------------------------|--|-------------|
| Environmental compartment | | | |
| 10125-13-0 | Copper(II) chloride dihydrate | | |
| Freshwater | | | 0,0078 mg/l |
| Marine water | | | 0,0052 mg/l |
| Freshwater sediment | | | 87 mg/kg |
| Marine sediment | | | 676 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | | 0,23 mg/l |
| Soil | | | 65 mg/kg |
| 7718-54-9 | nickel dichloride | | |
| Freshwater | | | 0,0071 mg/l |
| Freshwater (intermittent releases) | | | 0 mg/l |
| Marine water | | | 0,0086 mg/l |
| Freshwater sediment | | | 109 mg/kg |
| Marine sediment | | | 109 mg/kg |
| Secondary poisoning | | | 0,12 mg/kg |
| Micro-organisms in sewage treatment plants (STP) | | | 0,33 mg/l |
| Soil | | | 29,9 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

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Wear eye/face protection.

Hand protection

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

Recommended glove articles: KCL 741 Dermatril® L

Recommended material: NBR (Nitrile rubber) 0,11 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Recommended glove articles: 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: | colourless |
| Odour: | odourless |
| 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: | <1 |
| Viscosity / kinematic: | No data available |
| Water solubility: | completely miscible |

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Solubility in other solvents

No data available

Partition coefficient n-octanol/water:

No data available

Vapour pressure:

No data available

Vapour pressure:

No data available

Density:

~1,006 g/cm³

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

Sustained combustibility:

No data available

Self-ignition temperature

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.

10.2. Chemical stability

The product is stable under storage at normal ambient temperatures.

10.3. Possibility of hazardous reactions

Alkali (lye)

10.4. Conditions to avoid

No data available

10.5. Incompatible materials

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**

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

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

| CAS No | Chemical name | | | | |
|------------|-------------------------------|-------------------|---------|--|--|
| | Exposure route | Dose | Species | Source | Method |
| 10125-13-0 | Copper(II) chloride dihydrate | | | | |
| | oral | LD50 584 mg/kg | Rat | Publication (1991) | The test material was administered to gr |
| | dermal | LD50 > 2000 mg/kg | Rat | Study report (2003) | OECD Guideline 402 |
| 7718-54-9 | nickel dichloride | | | | |
| | oral | LD50 500 mg/kg | Rat | Regul Toxicol and Pharmacol (doi.org/10. | OECD Guideline 425 |
| | inhalation vapour | ATE 3 mg/l | | | |
| | inhalation dust/mist | ATE 0,5 mg/l | | | |

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.

Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitising effects

May cause an allergic skin reaction. (nickel dichloride)

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: 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 mixture itself.

Additional information on tests

There are no data available on the mixture itself.

Practical experience

There are no data available on the mixture itself.

11.2. Information on other hazards

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Other information

There are no data available on the mixture itself.

Further information

There are no data available on the mixture itself.

SECTION 12: Ecological information**12.1. Toxicity**

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

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| CAS No | Chemical name | | | | | |
|------------|-------------------------------|------------------|-----------|--|---|--|
| | Aquatic toxicity | Dose | [h] [d] | Species | Source | Method |
| 7647-01-0 | Hydrochloric acid | | | | | |
| | Acute fish toxicity | LC50 862 mg/l | 96 h | Leuciscus idus | | |
| 10125-13-0 | Copper(II) chloride dihydrate | | | | | |
| | Acute fish toxicity | LC50 0,193 mg/l | 96 h | Pimephales promelas | Study report (1996) | measurements were conducted by standard |
| | Acute algae toxicity | ErC50 0,152 mg/l | 72 h | Pseudokirchneriella subcapitata | Publication (2005) | OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 0,007 mg/l | 48 h | Daphnia magna | Study report (1978) | - Test were conducted on Daphnia magna t |
| | Fish toxicity | NOEC 0,123 mg/l | 12 d | Atherinops affinis | Mar. Environ. Res. 31: 17-35 (1991) | Three tests are reported, designed to de |
| | Algae toxicity | NOEC 0,0102 mg/l | 19 d | other aquatic plant: giant kelp Macrocystis pyrife | Mar. Ecol. Prog. Ser. 68: 147 - 156 (199) | Tests were conducted to determine the ef |
| | Crustacea toxicity | NOEC 0,033 mg/l | 14 d | Penaeus mergulensis and Penaeus monodon | Bull. Environ. Contain. Toxicol. (1995) | The effects of dissolved copper on the g |
| 7718-54-9 | nickel dichloride | | | | | |
| | Acute fish toxicity | LC50 15,3 mg/l | 96 h | Oncorhynchus mykiss | Aquatic Toxicology 63 (2003) 65-82 (2003) | other: not reported |
| | Acute algae toxicity | ErC50 0,263 mg/l | 72 h | Spermatozopsis exsultans | Publication (2009) | OECD Guideline 201 |
| | Acute crustacea toxicity | EC50 > 0,2 mg/l | 48 h | Ceriodaphnia dubia | Environmental Toxicology and Chemistry. | other: comparable to USEPA, Methods for |
| | Fish toxicity | NOEC 0,04 mg/l | 8 d | Danio rerio | Arch. Environ. Contam. Toxicol. 21:126-1 | other: Swedish Standard SS 02 81 93 |
| | Algae toxicity | NOEC 0,6 mg/l | 14 d | Anabaena cylindrica | Environ. Pollut. (Series A). 25(4):241-2 | other: not reported |
| | Crustacea toxicity | NOEC 0,09 mg/l | 21 d | Daphnia magna | Water Res. 23(4):501-510 (1989) | other: DIN 38412, Part II |
| | Acute bacteria toxicity | EC50 33 mg/l () | 0,5 h | Activated sludge | Journal of Hazardous Materials. B139:332 | ISO 8192 |

12.2. Persistence and degradability

There are no data available on the mixture itself.

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

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BCF

| CAS No | Chemical name | BCF | Species | Source |
|------------|-------------------------------|-----------|------------------|----------------------|
| 10125-13-0 | Copper(II) chloride dihydrate | 0,02 - 20 | Crangon crangon | Symp. Biologica. Hun |
| 7718-54-9 | Nickel dichloride | 39 | Chlorella salina | J. Mar. Biol. Ass. U |

12.4. Mobility in soil

There are no data available on the mixture itself.

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.

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 meet the criteria.

12.7. Other adverse effects

Harmful effect due to pH shift.

Forms corrosive mixtures with water even if diluted.

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 1789 |
| 14.2. UN proper shipping name: | HYDROCHLORIC ACID |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |
| Hazard label: | 8 |
| Classification code: | C1 |
| Special Provisions: | 520 |
| Limited quantity: | 5 L |
| Excepted quantity: | E1 |
| Transport category: | 3 |
| Hazard No: | 80 |
| Tunnel restriction code: | E |

Inland waterways transport (ADN)

| | |
|--|-------------------|
| 14.1. UN number or ID number: | UN 1789 |
| 14.2. UN proper shipping name: | HYDROCHLORIC ACID |
| 14.3. Transport hazard class(es): | 8 |
| 14.4. Packing group: | III |

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Hazard label: 8
Classification code: C1
Special Provisions: 520
Limited quantity: 5 L
Excepted quantity: E1

Marine transport (IMDG)

14.1. UN number or ID number: UN 1789
14.2. UN proper shipping name: HYDROCHLORIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Special Provisions: 223
Limited quantity: 5 L
Excepted quantity: E1
EmS: F-A, S-B

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number or ID number: UN 1789
14.2. UN proper shipping name: HYDROCHLORIC ACID
14.3. Transport hazard class(es): 8
14.4. Packing group: III
Hazard label: 8
Special Provisions: A3 A803
Limited quantity Passenger: 1 L
Passenger LQ: Y841
Excepted quantity: E1
IATA-packing instructions - Passenger: 852
IATA-max. quantity - Passenger: 5 L
IATA-packing instructions - Cargo: 856
IATA-max. quantity - Cargo: 60 L

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

Restrictions on use (REACH, annex XVII):
Entry 3, Entry 27, Entry 75

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**Changes**

This data sheet contains changes from the previous version in section(s): 1,8,9,12.

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Abbreviations and acronyms

Met. Corr. 1: Corrosive to metals, hazard category 1
Acute Tox. 3: Acute toxicity, hazard category 3
Skin Corr. 1B: Skin corrosion, sub-category 1B
Skin Irrit. 2: Skin irritation, hazard category 2
Eye Dam. 1: Serious eye damage, hazard category 1
Resp. Sens. 1: Respiratory sensitisation, hazard category 1
Skin Sens. 1: Skin sensitisation, hazard category 1
Muta. 2: Germ cell mutagenicity, hazard category 2
Carc. 1A: Carcinogenicity, hazard category 1A
Repr. 1B: Reproductive toxicity, hazard category 1B
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, hazard category: Acute 1
Aquatic Chronic 1: Hazardous to the aquatic environment, long-term hazard category: Chronic 1

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 |
| Skin Sens. 1; H317 | Calculation method |

Relevant H and EUH statements (number and full text)

| | |
|-------|--|
| H290 | May be corrosive to metals. |
| H301 | Toxic if swallowed. |
| H302 | Harmful if swallowed. |
| H312 | Harmful in contact with skin. |
| H314 | Causes severe skin burns and eye damage. |
| H315 | Causes skin irritation. |
| H317 | May cause an allergic skin reaction. |
| H318 | Causes serious eye damage. |
| H331 | Toxic if inhaled. |
| H334 | May cause allergy or asthma symptoms or breathing difficulties if inhaled. |
| H335 | May cause respiratory irritation. |
| H341 | Suspected of causing genetic defects. |
| H350i | May cause cancer by inhalation. |
| H360D | May damage the unborn child. |
| 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. |
| H411 | Toxic to aquatic life with long lasting effects. |

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 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.)