

**Adler-Ätzlösung zur Untersuchung von Schweißnähten im Stahl**

Revision date: 14.10.2022

Product code: 14060

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

**1.1. Product identifier**

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**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:           | Fa. Bernd Kraft GmbH            |                              |
| Street:                 | Stempelstraße 6                 |                              |
| Place:                  | D-47167 Duisburg                |                              |
| Telephone:              | 0203/5194-0                     | Telefax: 0203/5194-290       |
| e-mail:                 | info@berndkraft.de              |                              |
| Contact person:         | Abteilung Produktsicherheit     | Telephone: 0203/5194-107/117 |
| e-mail:                 | produktsicherheit@berndkraft.de |                              |
| Internet:               | www.berndkraft.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 Irrit. 2; H315

Eye Dam. 1; H318

Skin Sens. 1; H317

STOT SE 3; H335

Full text of hazard statements: see SECTION 16.

**2.2. Label elements**

**Regulation (EC) No 1272/2008**

**Hazard components for labelling**

Hydrochloric acid

iron trichloride

cuprate(2-), tetrachloro-, diammonium, dihydrate

nickel dichloride

**Signal word:** Danger

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**Pictograms:**



**Hazard statements**

- H290 May be corrosive to metals.
- H315 Causes skin irritation.
- H317 May cause an allergic skin reaction.
- H318 Causes serious eye damage.
- H335 May cause respiratory irritation.

**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.
- 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.
- 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

**Hazardous components**

| CAS No     | Chemical name  | Quantity         |
|------------|--|------------------|
|            | EC No  | Index No         |
|            |  | REACH No         |
|            | Classification (Regulation (EC) No 1272/2008)  |                  |
| 7647-01-0  | Hydrochloric acid  | 20 - < 25 %      |
|            | 231-595-7  | 017-002-01-X     |
|            |  | 01-2119484862-27 |
|            | Skin Corr. 1B, STOT SE 3; H314 H335  |                  |
| 7705-08-0  | iron trichloride   | 5 - < 10 %       |
|            | 231-729-4  |                  |
|            |  | 01-2119497998-05 |
|            | Met. Corr. 1, Acute Tox. 4, Skin Irrit. 2, Eye Dam. 1, Skin Sens. 1; H290 H302 H315 H318 H317  |                  |
| 10060-13-6 | cuprate(2-), tetrachloro-, diammonium, dihydrate   | 1 - < 5 %        |
|            | Skin Irrit. 2, Eye Irrit. 2, STOT SE 3; H315 H319 H335   |                  |
| 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.

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**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  | 20 - < 25 % |
|           |           | Skin Corr. 1B; H314: >= 25 - 100 Skin Irrit. 2; H315: >= 10 - < 25 Eye Irrit. 2; H319: >= 10 - < 25 STOT SE 3; H335: >= 10 - 100   |             |
| 7705-08-0 | 231-729-4 | iron trichloride   | 5 - < 10 %  |
|           |           | oral: ATE = 500 mg/kg  |             |
| 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<br>Aquatic Acute 1; H400: M=1<br>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).

**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.  
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.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting. Adverse human health effects and symptoms: Gastric perforation. Call a physician immediately. Do not allow a neutralisation agent to be drunk.

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

Irritant — skin irritation and eye damage  
Causes burns.  
Cough  
Dyspnoea  
Risk of serious damage to eyes.  
Circulatory collapse  
Cardiac arrhythmias  
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**

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**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:

Hydrochloric gas

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Avoid contact with skin, eyes and clothes.

**Additional information**

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

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.

Use personal protection equipment.

Avoid contact with skin, eyes and clothes.

Remove persons to safety.

Emergency procedures

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**

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**Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used.  
Read label before use. Handle and open container with care.  
When using do not eat, drink, smoke, sniff. Keep container tightly closed.  
Use personal protection equipment. Use extractor hood (laboratory).  
Provide adequate ventilation.  
Avoid contact with skin, eyes and clothes.

**Advice on protection against fire and explosion**

Usual measures for fire prevention.

**Advice on general occupational hygiene**

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.

**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**

Keep container tightly closed.  
Provide adequate ventilation as well as local exhaustion at critical locations.  
Keep in a cool place.

**Further information on storage conditions**

Unsuitable container/equipment material: Metal

**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 <sup>3</sup> | fib/cm <sup>3</sup> | Category      | Origin |
|-----------|--|-----|-------------------|---------------------|---------------|--------|
| 7647-01-0 | Hydrogen chloride                                      | 5   | 8                 |                     | TWA (8 h)     |        |
|           |  | 10  | 15                |                     | STEL (15 min) |        |
| -         | Nickel, inorganic compounds (as Ni), soluble compounds | -   | 0.1               |                     | 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/m <sup>3</sup>   |
| Worker DNEL, acute       | inhalation        | local    | 15 mg/m <sup>3</sup>  |
| Consumer DNEL, long-term | inhalation        | local    | 8 mg/m <sup>3</sup>   |
| Consumer DNEL, acute     | inhalation        | local    | 15 mg/m <sup>3</sup>  |
| 7718-54-9                | nickel dichloride |          |                       |
| Worker DNEL, acute       | inhalation        | local    | 1,6 mg/m <sup>3</sup> |
| Consumer DNEL, acute     | inhalation        | systemic | 8,8 mg/m <sup>3</sup> |
| Consumer DNEL, acute     | inhalation        | local    | 0,1 mg/m <sup>3</sup> |
| Worker DNEL, acute       | inhalation        | systemic | 104 mg/m <sup>3</sup> |
| 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         |  |
|--|-------------------|--|
| Environmental compartment                        | Value             |  |
| 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. Do not breathe gas/fumes/vapour/spray.

**Individual protection measures, such as personal protective equipment**

**Eye/face protection**

Suitable eye protection:

Face protection shield

goggles.

**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](mailto:vertrieb@kcl.de) With specification (test according to EN374):

By long-term hand contact

Trade name/designation: KCL 730 Camatril® Velours

Suitable material: NBR (Nitrile rubber) 0,4 mm

Wearing time with permanent contact: > 480 min

By short-term hand contact

Trade name/designation: KCL 720 Camapren®

Suitable material: CR (polychloroprene, chloroprene rubber) 0,65 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](http://www.kcl.de)).

**Skin protection**

Wear suitable protective clothing.

Protective clothing acid-resistant

**Respiratory protection**

Respiratory protection necessary at: aerosol or mist formation

**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:   | brown             |                   |
| Odour:  | stinging          |                   |
| Odour threshold:  | No data available |                   |
| Melting point/freezing point:                             |                   | No data available |
| Boiling point or initial boiling point and boiling range: |                   | No data available |
| Flammability  |                   |                   |
| Solid/liquid:   |                   | not applicable    |
| Gas:  |                   | not applicable    |
| Lower explosion limits:                                   |                   | No data available |
| Upper explosion limits:                                   |                   | No data available |
| Flash point:  |                   | X                 |
| Auto-ignition temperature:                                |                   | No data available |
| Decomposition temperature:                                |                   | No data available |
| pH-Value:   |                   | acidic            |
| Viscosity / kinematic:                                    |                   | No data available |
| Water solubility:   |                   | easily soluble    |
| Solubility in other solvents                              |                   |                   |
| not determined  |                   |                   |
| Partition coefficient n-octanol/water:                    |                   | No data available |
| Vapour pressure:  |                   | No data available |
| Vapour pressure:  |                   | No data available |

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|                          |                          |
|--------------------------|--------------------------|
| Density (at 20 °C):      | 1,2088 g/cm <sup>3</sup> |
| 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

Self-ignition temperature  
Solid: not applicable  
Gas: not applicable

Oxidizing properties  
No data available

**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:       |                   |
| 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**

Exothermic reaction with: Amines, permanganates, e.g. potassium permanganate, aldehydes  
Ignition hazard: Carbide, Fluorine  
Possibility of hazardous reactions: Aluminium, Formaldehyde, Metal, Alkali (lye)  
Danger of explosion: Alkali metals, Sulphuric acid, concentrated

**10.4. Conditions to avoid**

Heat

**10.5. Incompatible materials**

Keep away from: 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

**Further information**

No data available

**SECTION 11: Toxicological information**

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



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**Toxicokinetics, metabolism and distribution**

There are no data available on the mixture itself.

**Acute toxicity**

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

If swallowed danger of perforation of the esophagus and the stomach (strong corrosive effects).

Pulmonary oedema

| CAS No    | Chemical name        |                |         |  |                    |
|-----------|----------------------|----------------|---------|--|--------------------|
|           | Exposure route       | Dose           | Species | Source                                   | Method             |
| 7705-08-0 | iron trichloride     |                |         |  |                    |
|           | oral                 | ATE 500 mg/kg  |         |  |                    |
| 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**

Causes skin irritation.

Causes serious eye damage.

Risk of serious damage to eyes.

**Sensitising effects**

May cause an allergic skin reaction. (iron trichloride; nickel dichloride)

**Carcinogenic/mutagenic/toxic effects for reproduction**

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

**STOT-single exposure**

May cause respiratory irritation. (Hydrochloric acid)

**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**

**Other information**

There are no data available on the mixture itself.

**Further information**

Irritant — skin irritation and eye damage

Causes burns.

Cough

Dyspnoea

Risk of serious damage to eyes.

Circulatory collapse

Cardiac arrhythmias

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**SECTION 12: Ecological information**

**12.1. Toxicity**

There are no data available on the mixture itself.

| 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           |   |   |
| 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.

**BCF**

| CAS No    | Chemical name     | BCF | Species          | Source               |
|-----------|-------------------|-----|------------------|----------------------|
| 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.

The substance in the mixture does 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 meets the criteria.

**12.7. Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

Do not empty into drains.

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**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.  
Do not empty into drains.

**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.

**SECTION 14: Transport information**

**Land transport (ADR/RID)**

|  |   |
|--|---|
| <b>14.1. UN number or ID number:</b>     | UN 3264   |
| <b>14.2. UN proper shipping name:</b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| <b>14.3. Transport hazard class(es):</b> | 8   |
| <b>14.4. Packing group:</b>              | II  |
| Hazard label:                            | 8   |
| Classification code:                     | C1  |
| Special Provisions:                      | 274   |
| Limited quantity:                        | 1 L   |
| Excepted quantity:                       | E2  |
| Transport category:                      | 2   |
| Hazard No:                               | 80  |
| Tunnel restriction code:                 | E   |

**Inland waterways transport (ADN)**

|  |   |
|--|---|
| <b>14.1. UN number or ID number:</b>     | UN 3264   |
| <b>14.2. UN proper shipping name:</b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| <b>14.3. Transport hazard class(es):</b> | 8   |
| <b>14.4. Packing group:</b>              | II  |
| Hazard label:                            | 8   |
| Classification code:                     | C1  |
| Special Provisions:                      | 274   |
| Limited quantity:                        | 1 L   |
| Excepted quantity:                       | E2  |

**Marine transport (IMDG)**

|  |   |
|--|---|
| <b>14.1. UN number or ID number:</b>     | UN 3264   |
| <b>14.2. UN proper shipping name:</b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| <b>14.3. Transport hazard class(es):</b> | 8   |
| <b>14.4. Packing group:</b>              | II  |
| Hazard label:                            | 8   |
| Special Provisions:                      | 274   |
| Limited quantity:                        | 1 L   |
| Excepted quantity:                       | E2  |
| EmS:                                     | F-A, S-B  |

**Air transport (ICAO-TI/IATA-DGR)**

|  |   |
|--|---|
| <b>14.1. UN number or ID number:</b>     | UN 3264   |
| <b>14.2. UN proper shipping name:</b>    | CORROSIVE LIQUID, ACIDIC, INORGANIC, N.O.S. (Hydrochloric acid) |
| <b>14.3. Transport hazard class(es):</b> | 8   |
| <b>14.4. Packing group:</b>              | II  |

**Safety Data Sheet**

according to Regulation (EC) No 1907/2006

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|  |         |      |
|--|---------|------|
| Hazard label:                          | 8       |      |
| 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**

Restrictions on use (REACH, annex XVII):

Entry 3, Entry 27, Entry 75

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

**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): 3 - highly hazardous to water

**SECTION 16: Other information**

**Changes**

This data sheet contains changes from the previous version in section(s): 2,4,7,8,9,14,15.

**Abbreviations and acronyms**

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

EINECS: European Inventory of Existing Commercial Chemical Substances

ELINCS: European List of Notified Chemical Substances

CAS: Chemical Abstracts Service

LC50: Lethal concentration, 50%

LD50: Lethal dose, 50%

**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 Irrit. 2; H315 | Calculation method       |
| Eye Dam. 1; H318    | Calculation method       |
| Skin Sens. 1; H317  | Calculation method       |
| STOT SE 3; H335     | 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.       |

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|       |  |
|-------|--|
| H314  | Causes severe skin burns and eye damage.                                   |
| H315  | Causes skin irritation.  |
| H317  | May cause an allergic skin reaction.                                       |
| H318  | Causes serious eye damage.   |
| H319  | Causes serious eye irritation.   |
| 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.                      |

#### Further Information

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.

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