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

### 1.1. Product identifier

AAS standard potassium 100 mg K/l KCl in hydrochlorid acid 0.5 mol/l

UFI: NHA9-V06N-400S-C8FR

### 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

Full text of hazard statements: see SECTION 16.

### 2.2. Label elements

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

**Signal word:** Warning

**Pictograms:**

**Hazard statements**

H290 May be corrosive to metals.

**Precautionary statements**

P234 Keep only in original packaging.
P390 Absorb spillage to prevent material damage.

P406 Store in a corrosion-resistant container with a resistant inner liner.

**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 | |
| | Skin Corr. 1B, STOT SE 3; H314 H335 | | | |
| 7447-40-7 | potassium chloride | | | < 0.1 % |
| | 231-211-8 | | | |
| | | | | |

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 | | |
| 7447-40-7 | 231-211-8 | potassium chloride | < 0.1 % |
| | oral: LD50 = ca. 2600 mg/kg | | |

**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**

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.

**After ingestion**

Rinse mouth immediately and drink plenty of water.

Call a physician immediately.

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

Irritant

**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:
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 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**

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.
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.

**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/m³ | fib/cm³ | Category | Origin |
|---|---|---|---|---|---|---|
| 7647-01-0 | Hydrogen chloride | 5 | 8 | | TWA (8 h) | |
| | | 10 | 15 | | STEL (15 min) | |

**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 |
| 7447-40-7 | potassium chloride | | | |
| Worker DNEL, long-term | | inhalation | systemic | 1064 mg/m³ |
| Worker DNEL, acute | | inhalation | systemic | 5320 mg/m³ |
| Worker DNEL, long-term | | dermal | systemic | 303 mg/kg bw/day |
| Worker DNEL, acute | | dermal | systemic | 910 mg/kg bw/day |
| Consumer DNEL, long-term | | inhalation | systemic | 273 mg/m³ |
| Consumer DNEL, acute | | inhalation | systemic | 1365 mg/m³ |
| Consumer DNEL, long-term | | dermal | systemic | 182 mg/kg bw/day |
| Consumer DNEL, acute | | dermal | systemic | 910 mg/kg bw/day |
| Consumer DNEL, long-term | | oral | systemic | 91 mg/kg bw/day |
| Consumer DNEL, acute | | oral | systemic | 455 mg/kg bw/day |

**PNEC values**

| CAS No | Substance | |
|---|---|---|
| Environmental compartment | | Value |
| 7447-40-7 | potassium chloride | |
| Freshwater | | 0,1 mg/l |
| Freshwater (intermittent releases) | | 1 mg/l |
| Marine water | | 0,1 mg/l |
| Micro-organisms in sewage treatment plants (STP) | | 10 mg/l |

## 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.

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.
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: | colourless |
| Odour: | odourless |
| 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: | 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: | <1 |
| Viscosity / kinematic: | No data available |
| Water solubility: | easily soluble |
| Solubility in other solvents | |
| not determined | |
| Dissolution rate: | No data available |
| Partition coefficient n-octanol/water: | No data available |
| Dispersion stability: | No data available |
| Vapour pressure: | No data available |
| Vapour pressure: | No data available |
| Density: | No data available |
| Relative density: | No data available |

| | |
|---|---|
| Bulk density: | No data available |
| Relative vapour density: | No data available |
| Particle characteristics: | 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

| | |
|---|---|
| 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: | No data available |
| Solid content: | No data available |
| 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**

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

**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**

**Toxicocinetics, metabolism and distribution**

There are no data available on the mixture itself.

**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 |
| 7447-40-7 | potassium chloride | | | | |
| | oral | LD50 ca. 2600 mg/kg | rat, guinea pig, sheep, goat | J Pharmacol Exp Therap 35, 1-15, 1929 (1 | |

**Irritation and corrosivity**

Based on available data, the classification criteria are not met.
slightly irritant but not relevant for classification.

**Sensitising effects**

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

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

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.

**Information on likely routes of exposure**

There are no data available on the mixture itself.

**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**

**Endocrine disrupting properties**

There are no data available on the mixture itself.

**Other information**

There are no data available on the mixture itself.

**Further information**

Irritant

## SECTION 12: Ecological information

**12.1. Toxicity**

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

| 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 | | |
| 7447-40-7 | potassium chloride | | | | | | |
| | Acute fish toxicity | LC50 | 880 mg/l | 96 h | Pimephales promelas | Environmental Toxicology and Chemistry, | OECD Guideline 203 |
| | Acute algae toxicity | ErC50 mg/l | > 100 | 72 h | Desmodesmus subspicatus | Study report (2010) | OECD Guideline 201 |
| | Acute bacteria toxicity | EC50 mg/l ( ) | > 1000 | 3 h | activated sludge, domestic | Study report (2010) | OECD Guideline 209 |

**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.

**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 meets the criteria.

**12.7. Other adverse effects**

Discharge into the environment must be avoided.

**Further information**

Do not empty into drains.

## SECTION 13: Disposal considerations

**13.1. Waste treatment methods**

**Disposal recommendations**

Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste.

**Contaminated packaging**

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)**

| | |
|---|---|
| **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 |
| 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 |

**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**

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

**National regulatory information**

| | |
|---|---|
| Water hazard class (D): | - - non-hazardous to water |

## SECTION 16: Other information

**Changes**

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

**Abbreviations and acronyms**

Met. Corr: Substance or mixture corrosive to metals
Skin Corr: Skin corrosion
STOT SE: Specific target organ toxicity - single exposure
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 |

**Relevant H and EUH statements (number and full text)**

| | |
|---|---|
| H290 | May be corrosive to metals. |
| H314 | Causes severe skin burns and eye damage. |
| H335 | May cause respiratory irritation. |

**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.

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