

## Safety Data Sheet

according to Regulation (EC) No 1907/2006

### ICP Standard, Hf, 1000 Åµg/ml (140-052-72x)

Revision: 20.10.2025

Product code: AC18.06348

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

### 1.1. Product identifier

ICP Standard, Hf, 1000 Åµg/ml (140-052-72x)

### 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

#### Details of the supplier of the safety data sheet

Company name: AnalytiChem Services, Unipessoal, Lda  
Street: Rua de Júlio Dinis 676 7º  
Place: P-4050-320 Porto  
Telephone: +351 226002917  
E-mail: info@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Internet: www.analytichem.com  
Responsible Department: SDS service department

#### Supplier or manufacturer details

Company name: AnalytiChem Canada Inc.  
Street: Québec, CANADA  
21800 Clark Graham Ave  
Place: CDN-H9X 4B6 Baie-D'Urfé  
Telephone: +1 (800) 361-6820 Telefax: +1 (800) 253-5549  
E-mail: info@analytichem.com  
Contact person: SDS service department  
E-mail: SDS@analytichem.com  
Internet: www.analytichem.com  
Responsible Department: AnalytiChem:  
EU-Belgium: AnalytiChem Belgium, Industriezone "De Arend" 2, 8210 Zedelgem, Belgium, +32 50 28 83 20  
EU-Germany: AnalytiChem Germany, Stempelstrasse 6, 47167 Duisburg, Germany, +49 203 51 94 – 200  
EU-Netherlands: AnalytiChem Netherlands, Communicatieweg 7, 3641 SG Mijdrecht, The Netherlands, +31 297 286848  
UK: AnalytiChem UK, Unit 7 Launton Business Center, Murdock Road, Bicester, OX26 4XB, England, +44 1869 355 500  
USA: AnalytiChem USA, 227 China Road, Winslow, Maine, 04901, United States, +1 800-244-8378  
Canada: AnalytiChem Canada, 21800 Clark Graham Avenue, Baie d'Urfe, H9X 4B6, Canada, +1 514-457-0701  
Australia: ORE Research & Exploration Pty Ltd, 37A Hosie Street, Bayswater North, 3153, Australia, +61 3 9729 0333  
+353 1 901 4670 (CHEMTREC)

### 1.4. Emergency telephone number:

#### Further Information

No data available

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## 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 |           |
|           | Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3; H290 H314 H318 H335 |              |                  |           |

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 |                   |           |

**Further Information**

No data available

## SECTION 4: First aid measures

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**4.1. Description of first aid measures****General information**

Self-protection of the first aider

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

**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. 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

**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)

**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.

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Do not breathe vapour/aerosol.

**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).

Absorb with liquid-binding material (sand, diatomaceous earth, acid- or universal binding agents).

Collect in closed and suitable containers for disposal.

**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. Use extractor hood (laboratory).

**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**

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**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

Only for laboratory and analysis purposes.

**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) |        |

**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> |  |

**Additional advice on limit values**

Observe in addition any national regulations!

**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**

Wear suitable gloves.

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. Tested protective gloves must be worn. 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.

**Skin protection**

Wear suitable protective clothing. Take off immediately all contaminated clothing.

Wash hands before breaks and after work.

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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

Respiratory protection necessary at: aerosol or mist formation

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.

#### Thermal hazards

No data available

#### 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:                                                    | 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:                                             | 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                                         |                     |
| 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 (at 22 °C):                                       | 1.007 g/cm³         |
| 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

Sustained combustibility:

No data available

Self-ignition temperature

Solid:

No data available

Gas:

No data available

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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:       |                   |
| 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

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

#### Further information

No data available

### SECTION 11: Toxicological information

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

##### 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.

##### 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

##### 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.

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**Sensitising effects**

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

**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.

**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**

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

**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.

| 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 |        |

**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.

**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**

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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 allow to enter into surface water or drains.

**SECTION 13: Disposal considerations****13.1. Waste treatment methods****Disposal recommendations**

Send to a physico-chemical treatment facility under observation of official regulations .

Do not empty into drains.

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

**Contaminated packaging**

Handle contaminated packages in the same way as the substance itself.

**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>              | III                                                             |
| Hazard label:                            | 8                                                               |
| Classification code:                     | C1                                                              |
| Special Provisions:                      | 274                                                             |
| Limited quantity:                        | 5 L                                                             |
| Excepted quantity:                       | E1                                                              |
| Transport category:                      | 3                                                               |
| 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>              | III                                                             |
| Hazard label:                            | 8                                                               |
| Classification code:                     | C1                                                              |
| Special Provisions:                      | 274                                                             |
| Limited quantity:                        | 5 L                                                             |
| Excepted quantity:                       | E1                                                              |

**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>              | III                                                             |
| Hazard label:                            | 8                                                               |
| Special Provisions:                      | 223 274                                                         |
| Limited quantity:                        | 5 L                                                             |
| Excepted quantity:                       | E1                                                              |
| EmS:                                     | F-A, S-B                                                        |

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Segregation group: 1 - acids

## 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>              | 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

## Additional information

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

## National regulatory information

## SECTION 16: Other information

## Abbreviations and acronyms

- Met. Corr. 1: Corrosive to metals, hazard category 1
- Skin Corr. 1B: Skin corrosion, sub-category 1B
- Eye Dam. 1: Serious eye damage, hazard category 1
- STOT SE 3: Specific target organ toxicity - single exposure, hazard category 3

## 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.
- H318 Causes serious 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 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.

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Provide appropriate information, instructions and training to users

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