

# Safety Data Sheet

#90027388 · Full 16-section SDS

According to Regulation (EC) No 1907/2006

According to Regulation (EC) No 2020/878

| PRODUCT                               | CAS NUMBER | FORMULA | VERSION | REVISION DATE |
|---------------------------------------|------------|---------|---------|---------------|
| Hydrogen Chloride 18% (5M) in Ethanol | 7647-01-0  | HCl     | 10      | 15 Oct 2026   |

## SECTION 1

### Identification

#### 1.1 Product identifier

**Product name** Hydrogen Chloride 18% (5M) in Ethanol

**CAS number** 7647-01-0

**EC / EINECS number** 231-595-7

**UFI code** 5SQW-QEAM-AC8N-YQDX

**Chemical formula** HCl

**Molecular weight** 36.46

**SMILES** Cl

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

Research and development; not suitable for human consumption or veterinary purposes.

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

Molekula Limited  
1 Millennium Way, Newton Aycliffe  
Durham, DL5 6JW, United Kingdom  
info@molekula.com · +44 (0) 3302 000333

#### 1.4 Emergency telephone number

**0344 892 0111** — National Poisons Information Service (NPIS) (United Kingdom — for healthcare professionals (via TOXBASE))

## SECTION 2

### Hazard identification

#### 2.1 Classification of the substance or mixture

Flammable aerosols, Category 1

Corrosive to metals, Category 1

Skin corrosion, Category 1B

Serious eye damage, Category 1

Specific Target Organ Toxicity - Single exposure, Category 3

## 2.2 Label elements



**DANGER**

| CODE | HAZARD STATEMENT |
|------|------------------|
|------|------------------|

|      |                                    |
|------|------------------------------------|
| H225 | Highly flammable liquid and vapour |
|------|------------------------------------|

|      |                            |
|------|----------------------------|
| H290 | May be corrosive to metals |
|------|----------------------------|

|                    |                                         |
|--------------------|-----------------------------------------|
| H314 (sub cat. 1B) | Causes severe skin burns and eye damage |
|--------------------|-----------------------------------------|

|      |                                  |
|------|----------------------------------|
| H335 | May cause respiratory irritation |
|------|----------------------------------|

| CODE | PRECAUTIONARY STATEMENT |
|------|-------------------------|
|------|-------------------------|

|      |                                                                  |
|------|------------------------------------------------------------------|
| P210 | Keep away from heat/sparks/open flames/hot surfaces - No smoking |
|------|------------------------------------------------------------------|

|      |                                                 |
|------|-------------------------------------------------|
| P260 | Do not breathe dust/fume/gas/mist/vapours/spray |
|------|-------------------------------------------------|

|      |                                                                           |
|------|---------------------------------------------------------------------------|
| P280 | Wear protective gloves/protective clothing/eye protection/face protection |
|------|---------------------------------------------------------------------------|

|          |                                                                                             |
|----------|---------------------------------------------------------------------------------------------|
| P303+361 | IF ON SKIN (or hair): Remove immediately all contaminated clothing. Rinse with water/shower |
|----------|---------------------------------------------------------------------------------------------|

|          |                                                                                                 |
|----------|-------------------------------------------------------------------------------------------------|
| P304+340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing |
|----------|-------------------------------------------------------------------------------------------------|

## 2.3 Other hazards

*No data available*

## SECTION 3

### Composition / information on ingredients

#### 3.2 Mixtures

|                        |                                                                    |
|------------------------|--------------------------------------------------------------------|
| Concentration / purity | Hydrochloric acid 18% (CAS 7647-01-0) in ethanol 82% (CAS 64-17-5) |
|------------------------|--------------------------------------------------------------------|

|                                    |                       |
|------------------------------------|-----------------------|
| Impurities / stabilising additives | <i>Not applicable</i> |
|------------------------------------|-----------------------|

## SECTION 4

### First-aid measures

#### 4.1 Description of first aid measures

|                     |                                                                                                                                  |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------|
| <b>Inhalation</b>   | Remove person to fresh air and keep comfortable for breathing; seek medical attention if throat irritation or coughing persists. |
| <b>Skin contact</b> | Wash with plenty of soap and water for at least 15 minutes; get medical advice if you feel unwell.                               |
| <b>Eye contact</b>  | Remove contact lenses if present and rinse eyes with water for at least 15 minutes; seek medical attention.                      |
| <b>Ingestion</b>    | Rinse mouth; do NOT induce vomiting; get medical advice if you feel unwell.                                                      |

Get medical attention if any discomfort continues. Show this Safety Data Sheet (SDS) to medical personnel. First aiders/ medical personnel need to protect themselves.

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

*Not applicable*

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

Treat symptomatically; no special treatment required.

## SECTION 5

### Fire-fighting measures

#### 5.1 Extinguishing media

**Suitable extinguishing media** Alcohol-resistant foam, carbon dioxide or dry powder.

**Unsuitable extinguishing media** None known

#### 5.2 Special hazards arising from the substance or mixture

Flammable; vapours may form explosive mixtures with air and travel along the floor; containers may burst when heated; combustion produces carbon monoxide and carbon dioxide.

#### 5.3 Advice for firefighters

Evacuate area, avoid breathing fumes, wear suitable protective equipment and cool exposed containers with water spray.

## SECTION 6

### Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

Avoid inhalation and contact with skin and eyes; ensure ventilation, remove ignition sources and prevent static discharges; see section 8 for PPE.

#### 6.2 Environmental precautions

Avoid discharge into drains, water courses or onto the ground.

### 6.3 Methods and material for containment and cleaning up

Collect with absorbent non-combustible material into suitable containers using spark-proof tools and explosion-proof equipment.

### 6.4 Reference to other sections

For specific precautions, see Section 8 and Section 13.

## SECTION 7

### Handling & storage

#### 7.1 Precautions for safe handling

Keep away from heat and ignition sources, prevent static discharges, use spark-proof tools, wear protective equipment and avoid contact, ingestion and inhalation.

#### 7.2 Conditions for safe storage, including any incompatibilities

|                                                 |                                                                                                     |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------|
| Storage temperature                             | Ambient                                                                                             |
| Conditions for safe storage (incompatibilities) | Store at room temperature in a dry place in a closed container under inert gas; moisture sensitive. |

#### 7.3 Specific end use(s)

See Section 1.2.

## SECTION 8

### Exposure controls / personal protection

#### 8.1 Control parameters

Occupational exposure limits (OEL / WEL) *Not applicable*

DNEC/PNEC data *Not applicable*

#### 8.2 Exposure controls

|                                 |                                                                                                                                                                                                                                                                                                                                           |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Eye / face protection           | Safety glasses<br>Wear eye/face protection as recommended. All eye/face protection should comply with EN ISO 16321-1:2022.                                                                                                                                                                                                                |
| Skin / hand protection          | Wear protective gloves; wash contaminated skin thoroughly after handling.                                                                                                                                                                                                                                                                 |
| Respiratory protection          | Self-contained breathing apparatus<br>Keep self-contained breathing apparatus readily available for emergency use. Provide adequate ventilation. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory equipment: Reusable Air-Purifying Respirator (APR). Filter type: ABEK. Standard: EN 14387. |
| Other protection                | Wash skin thoroughly after handling. Use face shield when connecting the tubing                                                                                                                                                                                                                                                           |
| Environmental exposure controls | Avoid discharge into drains.                                                                                                                                                                                                                                                                                                              |

## SECTION 9

**Physical & chemical properties****9.1 Information on basic physical and chemical properties**

|                                                          |                                                        |
|----------------------------------------------------------|--------------------------------------------------------|
| <b>Appearance / physical state</b>                       | Liquid<br>DERIVED FROM: LITERATURE                     |
| <b>Colour</b>                                            | Colourless<br>DERIVED FROM: LITERATURE                 |
| <b>Odour</b>                                             | <i>Not applicable</i>                                  |
| <b>Melting / freezing point</b>                          | -114°C / -173.2°F<br>DERIVED FROM: LITERATURE          |
| <b>Boiling point</b>                                     | 78°C / 172.4°F at 1013 hPa<br>DERIVED FROM: LITERATURE |
| <b>Flammability</b>                                      | <i>No data available</i>                               |
| <b>Lower and upper explosion limit</b>                   | 2.5% (vol) - 13.5% (vol)<br>DERIVED FROM: LITERATURE   |
| <b>Flash point</b>                                       | 12 °C<br>DERIVED FROM: LITERATURE                      |
| <b>Auto-ignition temperature</b>                         | <i>Not applicable</i>                                  |
| <b>Decomposition temperature</b>                         | <i>No data available</i>                               |
| <b>pH</b>                                                | <2<br>DERIVED FROM: LITERATURE                         |
| <b>Acidity</b>                                           | Acid<br>DERIVED FROM: LITERATURE                       |
| <b>Kinematic viscosity</b>                               | <i>No data available</i>                               |
| <b>Solubility</b>                                        | <i>Not applicable</i>                                  |
| <b>Partition coefficient n-octanol/water (log value)</b> | <i>Not applicable</i>                                  |
| <b>Vapour pressure</b>                                   | 59 hPa at 20°C / 68°F<br>DERIVED FROM: LITERATURE      |
| <b>Density (g/mL)</b>                                    | 0.904 g/mL<br>DERIVED FROM: LITERATURE                 |
| <b>Relative vapour density</b>                           | <i>No data available</i>                               |
| <b>Particle characteristics</b>                          | <i>No data available</i>                               |

**9.2 Other information***No data available*

## SECTION 10

**Stability & reactivity****10.1 Reactivity**

There are no known reactivity hazards associated with this product.

## 10.2 Chemical stability

Stable under normal temperature conditions and under the prescribed storage conditions.

## 10.3 Possibility of hazardous reactions

There are no known conditions that are likely to result in a hazardous situation.

## 10.4 Conditions to avoid

Heat, sparks, flames.

## 10.5 Incompatible materials

Oxidising agents, bases.

## 10.6 Hazardous decomposition products

See section 5.

## SECTION 11

### Toxicological information

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

**Acute toxicity (LD50 / LC50)** *Not applicable*

**Skin corrosion / irritation** Causes severe burns

**Eye corrosion / irritation** Causes serious eye damage

**Respiratory / skin sensitisation** *Not applicable*

**Carcinogenicity** *Not applicable*

**Mutagenicity** *Not applicable*

**Reproductive toxicity** *Not applicable*

**STOT (single / repeated exposure)** Single exposure: May cause respiratory irritation

**Aspiration hazard** *Not applicable*

#### 11.2 Information on other hazards

*Not applicable*

## SECTION 12

### Ecological information

#### 12.1 Toxicity

*Not applicable*

#### 12.2 Persistence and degradability

*Not applicable*

#### 12.3 Bioaccumulative potential

*Not applicable*

#### 12.4 Mobility in soil

*Not applicable*

#### 12.5 Results of PBT and vPvB assessment

*Not applicable*

#### 12.6 Endocrine disrupting properties

*See Section 11.2.*

#### 12.7 Other adverse effects

*No data available*

### SECTION 13

## Disposal considerations

#### 13.1 Waste treatment methods

*Not applicable*

### SECTION 14

## Transport information

#### 14.1 UN number or ID number

UN2924

#### 14.2 UN proper shipping name

FLAMMABLE LIQUID, CORROSIVE, N.O.S.

#### 14.3 Transport hazard class(es)

3(8)



#### 14.4 Packing group

II

#### 14.5 Environmental hazards

Not classified as environmentally hazardous for transport

#### 14.6 Special precautions for user

|                              |                                                                                                  |
|------------------------------|--------------------------------------------------------------------------------------------------|
| Special precautions for user | Tunnel restriction code: D/E; Transport category: 2; IMDG EmS: F-E, S-C; IBC Instruction: IBC02. |
| Transport category           | 2                                                                                                |
| Tunnel code                  | (D/E)                                                                                            |
| Packing instruction (ADR)    | P001                                                                                             |
| Packing instruction (IMDG)   | P001                                                                                             |

#### 14.7 Maritime transport in bulk according to IMO instruments

No data available

### SECTION 15

#### Regulatory information

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

|                                                |                                                                                                                                                                                                                                                                                                           |
|------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Substance-specific regulations (e.g. licences) | National Regulations:<br>-Seveso III: Directive 2012/18/EU of the European Parliament and of the Council on the control of major-accident hazards involving dangerous substances<br>Other regulations, limitations and legal regulations:<br>-Directive 94/33/EC- The protection of young people at work. |
| REACH code                                     | Y110                                                                                                                                                                                                                                                                                                      |
| ECHA notification                              | Not applicable                                                                                                                                                                                                                                                                                            |

##### 15.2 Chemical safety assessment

Not applicable

### SECTION 16

#### Other information

|                                    |                                                                                                                                                                                       |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Revision notes / other information | Replaces SDS Version 1, issued 2024-01-24; classifications referenced: Flam. Aer. 1, Met. Corr. 1, Skin Corr. 1B, Eye Dam. 1, STOT SE 3, Flam. Liq. 2 (H224, H225, H290, H314, H335). |
|------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

This Safety Data Sheet was generated automatically from the data Molekula holds against this product, in the 16-section GHS/CLP format. Fields shown as "No data available" carry no recorded value; fields shown as "Not applicable" were assessed as not relevant to this substance. For queries, contact Molekula at [info@molekula.com](mailto:info@molekula.com).