# Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2020/878

# HYDROCHLORIC ACID

Date of SDS : 12.05.2023 Date of revision : -
Revision no. : 0 SDS Number : GBF - 4506

## 1- IDENTIFICATION OF THE SUBSTANCE AND OF THE COMPANY/UNDERTAKING

**1.1- Product Identifier:**

| | |
|---|---|
| **Product Name** | **HYDROCHLORIC ACID** |
| **CAS No** | 7647-01-0 |
| **EC No** | 231-595-7 |
| **UFI Code** | No data available |

**1.2- Relevant identified uses of the substance or mixture and uses advised against:**

| | |
|---|---|
| **Identified uses** | Used in petroleum, chemical, pharmaceutical, paint, paper, textile industries, resin regeneration, pickling, as a pH reducer for drinking and utility waters and in the production of metal chlorides. |
| **Used advised against** | Do not use for squirting or spraying. Do not use for products which come into direct contact with the skin. Do not use for products which come into contact with foodstuffs. Do not use for private purposes (household). |

**1.3- Details of the supplier of the safety data sheet:**

| | |
|---|---|
| **Company** | **Koyuncu Nakliye Pazarlama A.Ş./Koyuncu Kimya** |
| **Address** | Fevzi Çakmak Mah. 10787 Kapı No: 287 Karatay-Konya/Türkiye |
| **Tel/Fax** | +90 505 210 75 21 |
| **E-mail** | Onder.sungu@koyuncu.com |

**1.4- Emergency telephone number:**

+90 505 210 75 21

## 2- HAZARDS IDENTIFICATION

**2.1- Classification of the substance or mixture:**

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

Causes severe skin burns and eye damage/Skin Irritation, Category 1, H314
Specific Target Organ Toxicity, Single Exposure, may cause respiratory irritation, Category 3, H335
May be corrosive to metals, Category 1, H290

Notes: For the full text of the H sentences mentioned in this Section, see Section 16.

**2.2- Label elements (according to EC 1272/2008):**

**Labelling according to Regulation (EC) No. 1272/2008 [CLP]**

**GHS Pictograms**

GHS05 GHS07

| | |
|---|---|
| **Signal word** | Danger |
| **Contains** | Hydrochloric Acid |

**Hazard statements**

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

**Precautionary statements**

**Prevention**

P234 Keep only in original packaging.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

**Response**

P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P303 + P361 + P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with wa0ter [or shower].
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P309 + P311 IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician.

**Disposal**

P501 Dispose of contents/container to a hazardous or special waste collection point in accordance with local, regional, national and / or international regulations

### 2.3- Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0.1%.
The product does not contain substances with endocrine disrupting properties in concentration ≥ 0.1%.

## 3- COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1- Substances

Not applicable

### 3.2- Mixtures

**Description of the mixture:**

| Chemical Name | EC No. | CAS No. | % | Classification |
|---|---|---|---|---|
| Hydrochloric Acid | 231-595-7 | 7647-01-0 | 30 min. | Skin Corr. 1B - H314<br>STOT SE 3 - H335<br>Met. Corr. 1 H290 |
| Water | 231-791-2 | 7732-18-5 | | Not Classified. |

| Chemical Name | EC No. | CAS No. | Specific concentration limits | M-Factors | ATE |
|---|---|---|---|---|---|
| Hydrochloric Acid | 231-595-7 | 7647-01-0 | Met. Corr. 1; H290: C ≥ 0,1 %<br>Skin Corr. 1B; H314: C ≥ 25 %<br>Eye Irrit. 2; H319: 10 % ≤ C < 25 %<br>Skin Irrit. 2; H315: 10 % ≤ C < 25 %<br>STOT SE 3; H335: C ≥ 10 % | - | - |

Notes: The full text for all H-statements is displayed in section 16.

## 4- FIRST AID MEASURES

### 4.1- Description of first aid measures

**General information:**

Call a physician immediately. Never give anything by mouth to an unconscious person. People with over

sensibility problems are not allowed to work or be exposed to the product. In all cases of doubt, or when symptoms persist, seek medical attention.

**After skin contact**

Remove contaminated clothing and shoes. Immediately wash skin thoroughly with soap and plenty of water for at least 15 minutes. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

**After eye contact**

Carefully rinse eyes with plenty of water, including under the eyelids, for several minutes. Do not rub your eyes. Remove contact lenses if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

**After inhalation**

Immediately remove person to fresh air and keep comfortable for breathing. Wash nose and mouth with water. Oxygen may be administered to the person by properly trained personnel when breathing difficulties occur. If the problem persists, get the doctor/physician.

**After ingestion**

If swallowed, rinse the patient's mouth with clean water and then drink plenty of water or milk. DO NOT induce vomiting. Never give anything by mouth if unconscious. Consult the doctor.

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

| | |
|---|---|
| Skin contact | Causes severe burns. Symptoms following overexposure may include the following: Pain or irritation. Redness. Blistering may occur. |
| Eye contact | Causes serious eye damage. Symptoms following overexposure may include the following: Pain. Profuse watering of the eyes. Redness |
| Inhalation | Corrosive to the respiratory tract |
| Ingestion | May cause chemical burns in mouth, oesophagus and stomach. |

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

Treat symptomatically and supportively.

## 5- FIRE FIGHTING MEASURES

### 5.1- Extinguishing Media

**Suitable extinguishing media**

Foam, dry chemicals, carbon dioxide and water mist must be used. The fire should be reported in large fires. Care should always be taken to create an escape route in the fire.

**Unsuitable extinguishing media**

Do not use water jet as an extinguisher, as this will spread the fire. Simultaneous use of foam and water on the same surface is to be avoided as water destroys the foam.

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

May emit toxic gases as hydrogen chloride gas, etc.

### 5.3- Advice for firefighters

Avoid breathing fire vapours. Self-contained breathing apparatus and full protective clothing must be worn in case of fire. Wear a protective face mask, protective gloves, boots and safety helmet.

## 6- ACCIDENTAL RELEASE MEASURES

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

**6.1.1- For non-emergency personnel:**

Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

#### 6.1.2- For emergency responders:

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

### 6.2- Environmental precautions

Avoid release to the environment. Prevent further leakage or spillage if safe to do so. Prohibit entry to the area until the clean-up job is complete. Ventilate the area.Avoid discharge into drains, water courses or onto the ground.

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

Stop leak if without risk. Move containers from spill area. Provide appropriate personal protection. Clean the spillage mechanically (vacuum cleaner etc.) or collect it with a non-flammable absorbent material (eg sand, earth, etc.) or similar absorbent material (Chemizorb, vermiculite, sand, diatomite or similar inert material). Wash the spill area with water. Dispose of collected material or solid waste according to local regulations.

### 6.4- Reference to other sections

For information on safe handling see section 7, for information on personal protection equipment see section 8, for disposal-related information see section 13.

## 7- HANDLING AND STORAGE

### 7.1- Precautions for safe handling

Provide good ventilation in the workplace. Follow industrial hygiene standards and common rules to prevent inhalation, ingestion, exposure to the skin during use of chemicals. Remove contaminated clothing and wash before using again. Do not eat, drink or smoke when using this product. Do not get in contact with food, drinks or animal feed. Eyewash and shower should be available in the process area and where it is used.

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

Store in well-ventilated, dry and cool places. Keep containers closed and upright, protecting them from physical damage. Store in closed original packaging. Protect containers from physical damage. Follow the general rules used for storing chemicals. Protect containers from heat, sunlight. Even if containers are empty, they may contain product residue or vapours. Treat even empty containers as if they were full. Keep away from incompatible materials. Make sure the packaging cover is tightly closed. Follow local regulations. Recommended storage temperature: 15 - 25 °C

### 7.3- Specific end use(s)

The identified uses for this product are detailed in Section 1.2.

## 8- EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1- Control parameters

| Component | ACGIH TLV | OSHA PEL | NIOSH IDLH |
|---|---|---|---|
| **Hydrochloric acid** | Ceiling: 2 ppm | Ceiling: 5 ppm<br>Ceiling: 7 mg/m³ (Vacated)<br>Ceiling: 5 ppm (Vacated)<br>Ceiling: 7 mg/m³ | IDLH: 50 ppm<br>Ceiling: 5 ppm<br>Ceiling: 7 mg/m³ |

### 8.2- Exposure controls

#### 8.2.1- Appropriate engineering controls:

Make sure the working environment is well ventilated. Handle in accordance with industrial hygiene and safety rules. Wash your hands before taking a break from work and at the end of the day. Keep away from foodstuffs, beverages and animal feed. Immediately remove contaminated clothing. Wash your hands at the end of work and when taking a break from work. Do not eat or drink any food while using this product.

Ensure that there is an eye and/or body shower near the work area.

**8.2.2- Individual protective measures, such as personal protective equipment:**

**Respiratory protection:**

Respiratory protection is required if the overall level exceeds the recommended occupational exposure limits for work. Self-contained breathing apparatus. Filter P2. Suitable half mask (EN 143).

**Hands protection:**

Use protective gloves.
It is sufficient to consider puncture resistance, permeability rates and deterioration in selection of gloves. Selected protective gloves must comply with EN 374 standards.

**Glove material:**

Gloves made of NBR (Nitrile rubber), material thickness >0,3 mm, breakthrough times of the glove material >480 minutes (permeation: level 6)

**Eye protection:**

Use safety goggles or face masks that have been tested and approved in accordance with standards such as EN 166 (EU). Contact lenses should not be worn. Use face shields where there is a high risk of splashing and where there is a risk of direct contact with vapors.

**Body Protection:**

Choose appropriate body protection according to the type, concentration and amount of dangerous substance, and workplace conditions. Use waterproof clothing or a chemical suit in accordance with EN 14605.

**Hygiene measures**

Wash your hands after handling the material, before eating, drinking and/or before smoking. Immediately remove all contaminated clothing. In case of skin contamination, wash immediately with soap and water. Do not eat, drink or smoke during use. Keep contaminated clothing separate and wash before reuse.

**8.2.3- Environmental Exposure Controls**

The provisions of existing legislation for the protection of the environment must be fully implemented.

## 9- PHYSICAL AND CHEMICAL PROPERTIES

### 9.1- Information on basic physical and chemical properties

| Properties | | Value | Information |
|---|---|---|---|
| Physical state | : | Liquid | |
| Colour | : | Colourless | |
| Odour | : | Pungent | |
| pH Value | : | 1.0 (0.1 M solution) | @ 20˚C |
| Melting point/freezing point (˚C) | : | -40 | @ 760 mmHg |
| Boiling point or initial boiling point and boiling range | : | 75 ˚C | @ 760 mmHg |
| Evaporation rate (butylacetate=1) | : | No data available | |
| Flammability | : | Not applicable | |
| Flash point (˚C) | : | Not applicable | |
| Upper/lower flammability or explosive limits | : | Not applicable | |
| Vapor pressure, kPa | : | 2.2 | |
| Relative vapour density | : | No data available | |
| Density and/or Relative density | : | 1.149-1.155 gr/cm$^3$ | @ 20 ˚C |

| Properties | Value | Information |
|---|---|---|
| Solubility in water | : Soluble in water | |
| Partition coefficient: n-octanol/water | : No data available | |
| Auto-ignition temperature (˚C) | : Not applicable | |
| Decomposition temperature (˚C) | : No data available | |
| Viscosity, mPa's | : No data available | @ 20˚C |
| Particle size | : No data available | |
| Particle size distribution | : No data available | |

**9.2- Other information:**

**9.2.1- Information with regard to physical hazard classes:**

No data available

**9.2.2- Other safety characteristics:**

| | |
|---|---|
| Explosive properties | : No explosive properties. |
| Oxidising property | : No oxidizing property. |

## 10- STABILITY AND REACTIVITY

**10.1- Reactivity**

The product is stable and non-reactive under normal conditions of use, storage and transport.

**10.2- Chemical stability**

Stable under recommended handling and storage conditions.

**10.3- Possibility of hazardous reactions**

**Dangerous reactions with:** Strong oxidiser, Aldehydes, Aluminium, Amines, Carbide, Fluorine, Metals, Permanganates, Strong alkali,
**Danger of explosion:** Alkali metals, Sulphuric acid, concentrated.
Contact with metals may evolve flammable hydrogen gas.

**10.4- Conditions to avoid**

Incompatible products. Excess heat.

**10.5- Incompatible materials**

Well-known metals, water, amines, metal oxides, acetic anhydride, propiolactan, vinyl acetate, mercury sulfate, calcium phosphite, formaldehyde, alkalis, carbonates, strong bases, sulfuric acid, chlorosulfonic acid.

**10.6- Hazardous decomposition products**

Hydrogen chloride gas.

## 11- TOXICOLOGICAL INFORMATION

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

**Acute toxicity**

| Hydrochloric Acid (CAS# 7647-01-0) | |
|---|---|
| LC50 inhalation (rat) | 40 989 ppm, 5 Min |

**Skin corrosion/irritation**

Causes severe skin burns.

**Serious eye damage/irritation**

Causes severe eye damage

**Respiratory or Skin Sensitization**

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

**Germ cell mutagenicity**

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

**Carcinogenity**

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

**Reproductive toxicity**

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

**Specific Target Organ Toxicity (Single Exposure)**

May cause respiratory irritation.

**Specific Target Organ Toxicity (Repeated Exposure)**

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

**Aspiration Hazard**

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

### 11.2- Information on other hazards

#### 11.2.1- Endocrine disrupting properties

No test data is available for the mixture.

#### 11.2.2- Other information

No test data is available for the mixture.

## 12- ECOLOGICAL INFORMATION

The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.

### 12.1- Toxicity

| Hydrochloric Acid (CAS# 7647-01-0) | | |
|---|---|---|
| LC50 Fish | ≥ 3.25 - ≤ 3.5 (pH), 96 Hours | (Lepomis macrochirus) |
| EC50 Crustacea | 5.5 (pH), 48 Hours | (Daphnia magna) |
| EC50 Algae | 4.7 (pH), 96 Hours | (Chlorella vulgaris) |

### 12.2- Persistence and degradability

No data available.

### 12.3- Bioaccumulative potential

No data available.

### 12.4- Mobility in soil

No data available.

### 12.5- Results of PBT and vPvB assessment

This product does not contain any substances classified as PBT or vPvB.

### 12.6- Endocrine disrupting properties

No data available.

### 12.7- Other adverse effects

No data available.

## 13- DISPOSAL CONSIDERATIONS

**13.1- Waste treatment methods**

**Residual waste**

Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).

**Contaminated packaging**

Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

## 14- TRANSPORT INFORMATION

**Land transport (ADR/RID)**

| | | |
|---|---|---|
| **14.1-** | UN number | UN1789 |
| **14.2-** | UN proper shipping name | HYDROCHLORIC ACID |
| **14.3-** | Transport hazard class(es) | 8 |
| **14.4-** | Packing Group | II |
| **14.5-** | Environmental hazard | No |
| **14.6-** | Maritime transport in bulk according to IMO instruments | Not applicable. |
| | Classification code (ADR/RID) | C1 |
| | Limited Quantity (ADR/RID) | 1 L |
| | Exceptional amount (ADR/RID) | E2 |
| | Tank code (ADR/RID) | L4BN |
| | Vehicle for tank carriage | AT |
| | Tunnel code | 2 (E) |
| | Orange plate | 80 / 1789 |


**Sea transport (IMDG Code)**

| | | |
|---|---|---|
| **14.1-** | UN number | UN1789 |
| **14.2-** | UN proper shipping name | HYDROCHLORIC ACID |
| **14.3-** | Transport hazard class(es) | 8 |
| **14.4-** | Packing Group | II |
| **14.5-** | Environmental hazard | No |
| | Marine pollutant: | No |
| **14.6-** | Maritime transport in bulk according to IMO instruments | Not applicable. |
| | Limited Quantity (IMDG) | 1 L |
| | Exceptional amount (IMDG) | E1 |
| | EmS No (Fire) | F-A |
| | N*FS (Spill) | S-B |

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

| | | |
|---|---|---|
| **14.1-** | UN number | UN1789 |
| **14.2-** | UN proper shipping name | HYDROCHLORIC ACID |
| **14.3-** | Transport hazard class(es) | 8 |
| **14.4-** | Packing Group | II |
| **14.5-** | Environmental hazard | No |
| **14.6-** | Maritime transport in bulk according to IMO instruments | Not applicable. |


## 15- REGULATORY INFORMATION

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

- Regulation (EC) No 1907/2006, (REACH),
- Commission Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006,
- Regulation (EC) No 1272/2008 (CLP),
- Commission Directive 2000/39/EC.
- Commission Directive 2006/15/EC,
- ADR - European Agreement Concerning the International Carriage of Dangerous Goods by Road

**15.2- Chemical safety assessment**

A chemical safety assessment has not been performed for this product.

## 16- OTHER INFORMATION

**Full text of any H-statements not written out in full under Sections 2 to 15**

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

**List of abbreviations**

| | |
|---|---|
| ADN | European Agreement concerning the international Carriage of Dangerous Goods by Inlands Waterways |
| ADR | European Agreement Concerning the Int. Carriage of Dangerous Goods by Road |
| CAS No | Chemical Abstract Service Index Number |
| CLP | Regulation of Classification, Labelling and Packaging of Chemicals |
| EC No | European Commission Number |
| GHS | Globally Harmonized System of Classification and Labelling of Chemicals |
| IATA | International Air Transport Association |
| ICAO | International Civil Aviation Organization |
| IMDG | International Maritime Code for Dangerous Goods |
| LD50 | Dosage producing 50% mortality |
| PBT | Persistent, Bioaccumulative, Toxic |
| REACH | Regulation on the Registration, Evaluation, Authorisation and Restriction of Chemicals in the European Union |
| RID | International Rule for Transport of Dangerous Substances by Railway |
| STEL | Short Term Exposure Limit |
| TWA | Time Weighted Average |
| vPvB | Very Persistent, Very Bioaccumulative |

**Other Information:**

Date Prepared : May.12th, 2023
Version No : 1.0
Revision Date : -
Organized by : Gultekin Baskoylu (Chemist)

**Training information**

In addition to health, safety and environmental training programs for their workers, companies must ensure that workers read, understand and apply the requirements of this SDS to ensure human health and environmental protection.

**Sources of information:**

- ECHA and related EU directives,
- UN ADR, IMDG, IATA lists,
- Safety data sheets for raw materials and product components,
- Other helpful resources.

**Classification Calculation Methods**

- Chemical and physical hazards: Product classification is inferred from the criteria determined according to the REACH Directive (1907/2006), Annex I, Part 2. Data for the evaluation of chemical-physical properties are given in Chapter 9.
- Health hazards: Product classification is based on the calculation methods set out in Annex 1, Section 3 of the REACH Directive (1907/2006), unless otherwise stated in Chapter 11.
- Environmental hazards: Product classification is based on the calculation methods set out in Annex 1, Section 4 of the REACH Directive (1907/2006), unless otherwise stated in Chapter 12.

**Disclaimer**

This information relates to a specific product and is not available for use in combination with any process or with any other material. Do not use on other application(s) without consulting the manufacturer. Information about the product in this Safety Data Sheet has been compiled from knowledge of the individual components. The data given here is based on current knowledge and experience. This Safety Data Sheet analyzes the product in terms of safety requirements and does not give any guarantee of the properties for the product. Usage of the information remains under the sole responsibility of the user.

**Editor's note:**

This SDS has been drawn up based on the information and documents received from the product owner company. The preparer of the SDS cannot be held responsible for the erroneous arrangement of the prepared SDS due to incomplete or incorrect information and documents, and for the material and moral damages that the product owner company may encounter due to this reason.