# Hydrochloric Acid 28%

**Revision:** 2024-08-02 **Version:** 02.0

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

### 1.1 Product identifier
**Trade name:** Hydrochloric Acid 28%
Product identifier: Hydrochloric acid, REACH number: 01-2119484862-27, EC number: 231-595-7, CAS number: 7647-01-0

UFI: E4M3-T00G-M007-K7H1

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

| | |
|---|---|
| **Product use:** | Treatment of water used for drinking and in beverage production.<br>For industrial use only.. |
| **Uses advised against:** | Uses other than those identified are not recommended. |

**SWED - Sector-specific worker exposure description :**
AISE_SWED_IS_4_1

### 1.3 Details of the supplier of the safety data sheet
Diversey Europe Operations BV, De Corridor 4, 3621ZB Breukelen [Maarssenbroeksedijk 2, 3542DN Utrecht], The Netherlands

**Contact details**
Diversey Ltd
Weston Favell Centre, Northampton NN3 8PD, United Kingdom
Tel: 01604 405311, Fax: 01604 406809
Regulatory Email: customerservice.uk@solenis.com

### 1.4 Emergency telephone number
Seek medical advice (show the label or safety data sheet where possible)
For medical or environmental emergency only:
call 0800 052 0185

## SECTION 2: Hazards identification

### 2.1 Classification of the substance or mixture

Skin corrosion, Category 1A (H314)
Specific target organ toxicity - Single exposure, Category 3 (H335)
Serious eye damage, Category 1 (H318)
Corrosive to metals, Category 1 (H290)

### 2.2 Label elements

**Signal word:** Danger.

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

**Precautionary statements:**
P260 - Do not breathe vapours.
P280 - Wear protective gloves, protective clothing and eye or face protection.
P303 + P361 + P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water or shower.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P310 - Immediately call a POISON CENTRE, doctor or physician.

### 2.3 Other hazards
No other hazards known.

Regulated explosives precursor - Control of Poisons and Explosives Precursors Regulations 2015

## SECTION 3: Composition/information on ingredients

**3.1 Substances**

| Ingredient(s) | EC number | CAS number | REACH number | Classification | Notes | Weight percent |
|---|---|---|---|---|---|---|
| Hydrochloric acid | 231-595-7 | 7647-01-0 | 01-2119484862-27 | Skin corrosion, Category 1A (H314)<br>Specific target organ toxicity - Single exposure, Category 3 (H335)<br>Corrosive to metals, Category 1 (H290) | | >= 75 |

Workplace exposure limit(s), if available, are listed in subsection 8.1.
ATE, if available, are listed in section 11.
For the full text of the H and EUH phrases mentioned in this Section, see Section 16..

## SECTION 4: First aid measures

**4.1 Description of first aid measures**

**General Information:** Symptoms of intoxication may even occur after several hours. It is recommended to continue medical observation for at least 48 hours after the incident. If unconscious place in recovery position and seek medical advice. Provide fresh air. If breathing is irregular or stopped, administer artificial respiration. No mouth-to-mouth or mouth-to-nose resuscitation. Use Ambu bag or ventilator.

**Inhalation:** Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTRE, doctor or physician if you feel unwell.

**Skin contact:** Wash skin with plenty of lukewarm, gently flowing water for at least 30 minutes. Take off immediately all contaminated clothing and wash it before reuse. Immediately call a POISON CENTRE, doctor or physician.

**Eye contact:** Hold eyelids apart and flush eyes with plenty of lukewarm water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTRE, doctor or physician.

**Ingestion:** Rinse mouth. Immediately drink 1 glass of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Keep at rest. Immediately call a POISON CENTRE, doctor or physician.

**Self-protection of first aider:** Consider personal protective equipment as indicated in subsection 8.2.

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

**Inhalation:** May cause respiratory irritation.

**Skin contact:** Causes severe burns.

**Eye contact:** Causes severe or permanent damage.

**Ingestion:** Ingestion will lead to a strong caustic effect on mouth and throat and to the danger of perforation of oesophagus and stomach.

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

No information available on clinical testing and medical monitoring. Specific toxicological information on substances, if available, can be found in section 11.

## SECTION 5: Firefighting measures

**5.1 Extinguishing media**

Carbon dioxide. Dry powder. Water spray jet. Fight larger fires with water spray jet or alcohol-resistant foam.

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

No special hazards known.

**5.3 Advice for firefighters**

As in any fire, wear self contained breathing apparatus and suitable protective clothing including gloves and eye/face protection.

## SECTION 6: Accidental release measures

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

Ensure adequate ventilation. Do not breathe dust or vapour. Wear suitable protective clothing. Wear eye/face protection. Wear suitable gloves.

**6.2 Environmental precautions**

Dilute with plenty of water. Do not allow to enter drainage system, surface or ground water.

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

Ensure adequate ventilation. Dyke to collect large liquid spills. Use neutralising agent. Absorb with liquid-binding material (sand, diatomite,

universal binders). Do not place spilled materials back into the original container. Collect in closed and suitable containers for disposal.

**6.4 Reference to other sections**
For personal protective equipment see subsection 8.2. For disposal considerations see section 13.

## SECTION 7: Handling and storage

**7.1 Precautions for safe handling**
**Measures to prevent fire and explosions:**
No special precautions required.
**Measures required to protect the environment:**
For environmental exposure controls see subsection 8.2.
**Advices on general occupational hygiene:**
Handle in accordance with good industrial hygiene and safety practice. Keep away from food, drink and animal feeding stuffs. Do not mix with other products unless adviced by Diversey. Wash face, hands and any exposed skin thoroughly after handling. Take off immediately all contaminated clothing. Wash contaminated clothing before reuse. Avoid contact with skin and eyes. Do not breathe vapours. Use only outdoors or in a well-ventilated area. See chapter 8.2, Exposure controls / Personal protection.

**7.2 Conditions for safe storage, including any incompatibilities**
Store in accordance with local and national regulations. Store in a closed container. Keep only in original packaging.
For conditions to avoid see subsection 10.4. For incompatible materials see subsection 10.5.

**7.3 Specific end use(s)**
No specific advice for end use available.

## SECTION 8: Exposure controls/personal protection

**8.1 Control parameters**
**Workplace exposure limits**

Air limit values, if available:

| Ingredient(s) | UK - Long term value(s) | UK - Short term value(s) |
|---|---|---|
| Hydrochloric acid | 1 ppm aerosol mist and gas<br>2 mg/m³ aerosol mist and gas | 5 ppm aerosol mist and gas<br>8 mg/m³ aerosol mist and gas |

Biological limit values, if available:

**Recommended monitoring procedures, if available:**

**Additional exposure limits under the conditions of use, if available:**

**DNEL/DMEL and PNEC values**
**Human exposure**
DNEL/DMEL oral exposure - Consumer (mg/kg bw)

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|---|---|---|---|---|
| Hydrochloric acid | - | - | - | - |

DNEL/DMEL dermal exposure - Worker

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects (mg/kg bw) | Long term - Local effects | Long term - Systemic effects (mg/kg bw) |
|---|---|---|---|---|
| Hydrochloric acid | - | - | - | - |

DNEL/DMEL dermal exposure - Consumer

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects (mg/kg bw) | Long term - Local effects | Long term - Systemic effects (mg/kg bw) |
|---|---|---|---|---|
| Hydrochloric acid | - | - | - | - |

DNEL/DMEL inhalatory exposure - Worker (mg/m³)

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|---|---|---|---|---|
| Hydrochloric acid | 15 | - | 8 | - |

DNEL/DMEL inhalatory exposure - Consumer (mg/m³)

| Ingredient(s) | Short term - Local effects | Short term - Systemic effects | Long term - Local effects | Long term - Systemic effects |
|---|---|---|---|---|
| Hydrochloric acid | - | - | - | - |

**Environmental exposure**

Environmental exposure - PNEC

| Ingredient(s) | Surface water, fresh (mg/l) | Surface water, marine (mg/l) | Intermittent (mg/l) | Sewage treatment plant (mg/l) |
|---|---|---|---|---|
| Hydrochloric acid | 0.036 | 0.036 | 0.045 | 0.036 |

Environmental exposure - PNEC, continued

| Ingredient(s) | Sediment, freshwater (mg/kg) | Sediment, marine (mg/kg) | Soil (mg/kg) | Air (mg/m³) |
|---|---|---|---|---|
| Hydrochloric acid | - | - | 0.036 | - |

**8.2 Exposure controls**

*The following information applies for the uses indicated in subsection 1.2 of the Safety Data Sheet.*
*If available, please refer to the product information sheet for application and handling instructions.*
*Normal use conditions are assumed for this section.*

*Recommended safety measures for handling the undiluted product:*

**Appropriate engineering controls:** No special requirements under normal use conditions.
**Appropriate organisational controls:** Avoid direct contact and/or splashes where possible. Train personnel.

**REACH use scenarios considered for the undiluted product:**

| | SWED - Sector-specific worker exposure description | LCS | PROC | Duration (min) | ERC |
|---|---|---|---|---|---|
| Automatic application in a dedicated system | AISE_SWED_IS_4_1 | IS | PROC 4 | 480 | ERC8a |

**Personal protective equipment**

**Eye / face protection:** Safety glasses or goggles (EN 16321 / EN 166). The use of a full-face shield or other full-face protection is strongly recommended when handling open containers or if splashes may occur.

**Hand protection:** Chemical-resistant protective gloves (EN 374). Verify instructions regarding permeability and breakthrough time, as provided by the gloves supplier. Consider specific local use conditions, such as risk of splashes, cuts, contact time and temperature.
Suggested gloves for prolonged contact: Material: butyl rubber Penetration time: ≥ 480 min Material thickness: ≥ 0.7 mm
Suggested gloves for protection against splashes: Material: nitrile rubber Penetration time: ≥ 30 min Material thickness: ≥ 0.4 mm
In consultation with the supplier of protective gloves a different type providing similar protection may be chosen.

**Body protection:** Wear chemical-resistant clothing and boots in case direct dermal exposure and/or splashes may occur (EN 14605).

**Respiratory protection:** Respiratory protection is not normally required. However, inhalation of vapour, spray, gas or aerosols should be avoided.

**Environmental exposure controls:** Should not reach sewage water or drainage ditch undiluted or unneutralised.

## SECTION 9: Physical and chemical properties

**9.1 Information on basic physical and chemical properties**
**Information in this section refers to the product, unless it is specifically stated that substance data is listed**

**Method / remark**

**Physical state:** Liquid
**Colour:** Clear , Pale , from Colourless to Yellow
**Odour:** Product specific
**Odour threshold:** Not applicable
**Melting point/freezing point (°C):** Not determined — Not relevant to classification of this product
**Initial boiling point and boiling range (°C):** Not determined — See substance data

Substance data, boiling point

| Ingredient(s) | Value (°C) | Method | Atmospheric pressure (hPa) |
|---|---|---|---|
| Hydrochloric acid | 50-90 | Method not given | |

**Method / remark**

**Flammability (solid, gas):** Not applicable to liquids
**Flammability (liquid):** Not flammable.
**Flash point (°C):** Not applicable.
**Sustained combustion:** Not applicable.

*( UN Manual of Tests and Criteria, section 32, L.2 )*

**Lower and upper explosion limit/flammability limit (%):** Not determined

Substance data, flammability or explosive limits, if available:

| | Method / remark |
|---|---|
| **Autoignition temperature:** Not determined | |
| **Decomposition temperature:** Not applicable. | |
| **pH:** =< 2 | ISO 4316 |
| **Kinematic viscosity:** Not determined | Not relevant to classification of this product |
| **Solubility in / Miscibility with water:** Fully miscible | |

Substance data, solubility in water

| Ingredient(s) | Value (g/l) | Method | Temperature (°C) |
|---|---|---|---|
| Hydrochloric acid | 500 | Method not given | |

Substance data, partition coefficient n-octanol/water (log Kow): see subsection 12.3

| | Method / remark |
|---|---|
| **Vapour pressure:** Not determined | See substance data |

Substance data, vapour pressure

| Ingredient(s) | Value (Pa) | Method | Temperature (°C) |
|---|---|---|---|
| Hydrochloric acid | 1450-6100 | Method not given | 20 |

| | Method / remark |
|---|---|
| **Relative density:** ≈ 1.15 (20 °C) | OECD 109 (EU A.3) |
| **Relative vapour density:** No data available. | Not relevant to classification of this product |
| **Particle characteristics:** No data available. | Not applicable to liquids. |

**9.2 Other information**
**9.2.1 Information with regard to physical hazard classes**
**Explosive properties:** Not explosive.
**Oxidising properties:** Not oxidising.
**Corrosion to metals:** Corrosive

**9.2.2 Other safety characteristics**
No other relevant information available.

## SECTION 10: Stability and reactivity

**10.1 Reactivity**
No reactivity hazards known under normal storage and use conditions.

**10.2 Chemical stability**
Stable under normal storage and use conditions.

**10.3 Possibility of hazardous reactions**
No hazardous reactions known under normal storage and use conditions.

**10.4 Conditions to avoid**
None known under normal storage and use conditions.

**10.5 Incompatible materials**
May be corrosive to metals. Reacts with alkali. Keep away from products containing chlorine-based bleaching agents or sulphites.

**10.6 Hazardous decomposition products**
None known under normal storage and use conditions.

## SECTION 11: Toxicological information

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

Mixture data: .

**Relevant calculated ATE(s):**
ATE - Oral (mg/kg): >2000

Substance data, where relevant and available, are listed below:.

### Acute toxicity

Acute oral toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) | ATE Oral (mg/kg) |
|---|---|---|---|---|---|---|
| Hydrochloric acid | $LD_{50}$ | 900 | Rabbit | Method not given | | 900 |

Acute dermal toxicity

| Ingredient(s) | Endpoint | Value (mg/kg) | Species | Method | Exposure time (h) | ATE Dermal (mg/kg) |
|---|---|---|---|---|---|---|
| Hydrochloric acid | $LD_{50}$ | > 5010 | Rabbit | Method not given | | 5010 |

Acute inhalative toxicity

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| Hydrochloric acid | $LC_{50}$ | 8 (mist) | Rat | Method not given | 0.5 |

Acute inhalative toxicity, continued

| Ingredient(s) | ATE - inhalation, dust (mg/l) | ATE - inhalation, mist (mg/l) | ATE - inhalation, vapour (mg/l) | ATE - inhalation, gas (mg/l) |
|---|---|---|---|---|
| Hydrochloric acid | Not established | Not established | Not established | Not established |

### Irritation and corrosivity

Skin irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| Hydrochloric acid | Corrosive | Rabbit | Method not given | |

Eye irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| Hydrochloric acid | Corrosive Severe damage | Rabbit | OECD 405 (EU B.5) | |

Respiratory tract irritation and corrosivity

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| Hydrochloric acid | Irritating to respiratory tract | | | |

### Sensitisation

Sensitisation by skin contact

| Ingredient(s) | Result | Species | Method | Exposure time (h) |
|---|---|---|---|---|
| Hydrochloric acid | Not sensitising | Guinea pig | OECD 406 (EU B.6) / GPMT | |

Sensitisation by inhalation

| Ingredient(s) | Result | Species | Method | Exposure time |
|---|---|---|---|---|
| Hydrochloric acid | No data available | | | |

### CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)

Mutagenicity

| Ingredient(s) | Result (in-vitro) | Method (in-vitro) | Result (in-vivo) | Method (in-vivo) |
|---|---|---|---|---|
| Hydrochloric acid | No evidence for mutagenicity | OECD 471 (EU B.12/13) | No data available | |

Carcinogenicity

| Ingredient(s) | Effect |
|---|---|
| Hydrochloric acid | No evidence for carcinogenicity, negative test results |

Toxicity for reproduction

| Ingredient(s) | Endpoint | Specific effect | Value (mg/kg bw/d) | Species | Method | Exposure time | Remarks and other effects reported |
|---|---|---|---|---|---|---|---|
| Hydrochloric acid | | | No data available | | | | No evidence for reproductive toxicity |

### Repeated dose toxicity

Sub-acute or sub-chronic oral toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Sub-chronic dermal toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Sub-chronic inhalation toxicity

| Ingredient(s) | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time (days) | Specific effects and organs affected |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Chronic toxicity

| Ingredient(s) | Exposure route | Endpoint | Value (mg/kg bw/d) | Species | Method | Exposure time | Specific effects and organs affected | Remark |
|---|---|---|---|---|---|---|---|---|
| Hydrochloric acid | | | No data available | | | | | |

STOT-single exposure

| Ingredient(s) | Affected organ(s) |
|---|---|
| Hydrochloric acid | No data available |

STOT-repeated exposure

| Ingredient(s) | Affected organ(s) |
|---|---|
| Hydrochloric acid | No data available |

**Aspiration hazard**
Substances with an aspiration hazard (H304), if any, are listed in section 3.

**Potential adverse health effects and symptoms**
Effects and symptoms related to the product, if any, are listed in subsection 4.2.

**11.2 Information on other hazards**
**11.2.1 Endocrine disrupting properties**
Endocrine disrupting properties - Human data, if available:

**11.2.2 Other information**
No other relevant information available.

## SECTION 12: Ecological information

**12.1 Toxicity**

Substance data, where relevant and available, are listed below:

**Aquatic short-term toxicity**
Aquatic short-term toxicity - fish

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| Hydrochloric acid | $LC_{50}$ | 7.45 | *Various species* | Method not given | 96 |

Aquatic short-term toxicity - crustacea

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| Hydrochloric acid | $EC_{50}$ | 0.492 | *Daphnia magna Straus* | Method not given | 48 |

Aquatic short-term toxicity - algae

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (h) |
|---|---|---|---|---|---|
| Hydrochloric acid | $EC_{50}$ | 0.73 | *Pseudokirchneriella subcapitata* | Method not given | 72 |

Aquatic short-term toxicity - marine species

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time (days) |
|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | |

Impact on sewage plants - toxicity to bacteria

| Ingredient(s) | Endpoint | Value (mg/l) | Inoculum | Method | Exposure time |
|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | |

**Aquatic long-term toxicity**

Aquatic long-term toxicity - fish

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Aquatic long-term toxicity - crustacea

| Ingredient(s) | Endpoint | Value (mg/l) | Species | Method | Exposure time | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Aquatic toxicity to other aquatic benthic organisms, including sediment-dwelling organisms, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw sediment) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

**Terrestrial toxicity**

Terrestrial toxicity - soil invertebrates, including earthworms, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Terrestrial toxicity - plants, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Terrestrial toxicity - birds, if available:

| Ingredient(s) | Endpoint | Value | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Terrestrial toxicity - beneficial insects, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

Terrestrial toxicity - soil bacteria, if available:

| Ingredient(s) | Endpoint | Value (mg/kg dw soil) | Species | Method | Exposure time (days) | Effects observed |
|---|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | | |

**12.2 Persistence and degradability**

**Abiotic degradation**

Abiotic degradation - photodegradation in air, if available:

| Ingredient(s) | Half-life time | Method | Evaluation | Remark |
|---|---|---|---|---|
| Hydrochloric acid | No data available | | | |

Abiotic degradation - hydrolysis, if available:

| Ingredient(s) | Half-life time in fresh water | Method | Evaluation | Remark |
|---|---|---|---|---|
| Hydrochloric acid | No data available | | | |

Abiotic degradation - other processes, if available:

| Ingredient(s) | Type | Half-life time | Method | Evaluation | Remark |
|---|---|---|---|---|---|
| Hydrochloric acid | | No data available | | | |

**Biodegradation**

Ready biodegradability - aerobic conditions

| Ingredient(s) | Inoculum | Analytical method | $DT_{50}$ | Method | Evaluation |
|---|---|---|---|---|---|
| Hydrochloric acid | | | | | Not applicable (inorganic substance) |

Ready biodegradability - anaerobic and marine conditions, if available:

| Ingredient(s) | Medium & Type | Analytical method | $DT_{50}$ | Method | Evaluation |
|---|---|---|---|---|---|
| Hydrochloric acid | | | | | No data available |

Degradation in relevant environmental compartments, if available:

| Ingredient(s) | Medium & Type | Analytical method | $DT_{50}$ | Method | Evaluation |
|---|---|---|---|---|---|
| Hydrochloric acid | | | | | No data available |

**12.3 Bioaccumulative potential**

Partition coefficient n-octanol/water (log Kow)

| Ingredient(s) | Value | Method | Evaluation | Remark |
|---|---|---|---|---|
| Hydrochloric acid | -0.25 | Method not given | No bioaccumulation expected | |

Bioconcentration factor (BCF)

| Ingredient(s) | Value | Species | Method | Evaluation | Remark |
|---|---|---|---|---|---|
| Hydrochloric acid | No data available | | | | |

**12.4 Mobility in soil**

Adsorption/Desorption to soil or sediment

| Ingredient(s) | Adsorption coefficient Log Koc | Desorption coefficient Log Koc(des) | Method | Soil/sediment type | Evaluation |
|---|---|---|---|---|---|
| Hydrochloric acid | No data available | | | | High potential for mobility in soil |

**12.5 Results of PBT and vPvB assessment**

Substances that fulfill the criteria for PBT/vPvB, if any, are listed in section 3.

**12.6 Endocrine disrupting properties**

Endocrine disrupting properties - Environmental effects, if available:

**12.7 Other adverse effects**

No other adverse effects known.

## SECTION 13: Disposal considerations

**13.1 Waste treatment methods**

**Waste from residues / unused products:** The concentrated contents or contaminated packaging should be disposed of by a certified handler or according to the site permit. Release of waste to sewers is discouraged. The cleaned packaging material is suitable for energy recovery or recycling in line with local legislation.

**European Waste Catalogue:** 20 01 14* - acids.

**Empty packaging**

**Recommendation:** Dispose of observing national or local regulations.

**Suitable cleaning agents:** Water, if necessary with cleaning agent.

## SECTION 14: Transport information


**Land transport (ADR/RID), Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)**

**14.1 UN number or ID number:** 1789

**14.2 UN proper shipping name:**

Hydrochloric acid , solution

**14.3 Transport hazard class(es):**

**Transport hazard class (and subsidiary risks):** 8

**14.4 Packing group:** II

**14.5 Environmental hazards:**

**Environmentally hazardous:** No

**Marine pollutant:** No

**14.6 Special precautions for user:** None known.

**14.7 Maritime transport in bulk according to IMO instruments:** The product is not transported in bulk tankers.

**Other relevant information:**

**ADR**

**Classification code:** C1

**Tunnel restriction code:** (E)

**Hazard identification number:** 80

**IMO/IMDG**

**EmS:** F-A, S-B

The product has been classified, labelled and packaged in accordance with the requirements of ADR and the provisions of the IMDG Code
Transport regulations include special provisions for certain classes of dangerous goods packed in limited quantities.

## SECTION 15: Regulatory information

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

**National regulations :**

- Regulation (EC) 1907/2006 - REACH (UK amended)
- Regulation (EC) 1272/2008 - CLP (UK amended)
- Delegated Regulation (EU) 2017/2100 and Regulation (EU) 2018/605 (UK amended)
- Agreement concerning the International Carriage of Dangerous Goods by Road (ADR)
- International Maritime Dangerous Goods (IMDG) Code
- Control of Poisons and Explosives Precursors Regulations 2015

**Authorisations or restrictions (Regulation (EC) No 1907/2006, Title VII respectively Title VIII):** Not applicable.

**Comah - classification:** Not classified

**15.2 Chemical safety assessment**

A chemical safety assessment has not been carried out on the substance

## SECTION 16: Other information

*The information in this document is based on our best present knowledge. However, it does not constitute a guarantee for any specific product features and does not establish a legally binding contract*

**SDS code:** MS1003758 **Version:** 02.0 **Revision:** 2024-08-02

**Reason for revision:**

This data sheet contains changes from the previous version in section(s):, 1, 2, 3, 14, 16

**Abbreviations and acronyms:**

- AISE - The international Association for Soaps, Detergents and Maintenance Products
- ATE - Acute Toxicity Estimate
- DNEL - Derived No Effect Limit
- EC50 - effective concentration, 50%
- ERC - Environmental release categories

- EUH - CLP Specific hazard statement
- LC50 - Lethal Concentration, 50% / Median Lethal Concentration
- LCS - Life cycle stage
- LD50 - Lethal Dose, 50% / Median Lethal dose
- NOAEL - No observed adverse effect level
- NOEL - No observed effect level
- OECD - Organisation for Economic Cooperation and Development
- PBT - Persistent, Bioaccumulative and Toxic
- PNEC - Predicted No Effect Concentration
- PROC - Process categories
- REACH number - REACH registration number, without supplier specific part
- vPvB - very Persistent and very Bioaccumulative
- H290 - May be corrosive to metals.
- H314 - Causes severe skin burns and eye damage.
- H318 - Causes serious eye damage.
- H335 - May cause respiratory irritation.

**End of Safety Data Sheet**