

**1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING**

**1.1 Product identifiers**

Product name: **HYDROCHLORIC ACID**

CAS-No.: **7647-01-0**

Product Number: **L19299**

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

Identified uses: Laboratory chemicals, Manufacture of substances

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

Company : Philip Harris Ltd., 2 Gregory Street, Hyde, Cheshire, SK14 4HR,

UNITED KINGDOM

Telephone: +44 (0)845 1200 506 Fax: +44 (0)161 367 2140

Email: enquiries@philipharris.co.uk

**1.4 Emergency telephone number**

Emergency Phone #: **+44 (0)845 1200 506**

**2. HAZARDS IDENTIFICATION**

**2.1 Classification of the substance or mixture**

**According to Regulation (EC) No1272/2008:** Skin corrosion (Category 1B), Specific target organ toxicity - single exposure (Category 3)

**According to European Directive 67/548/EEC as amended:** Causes burns. Irritating to respiratory system.

**2.2 Label elements**

Pictogram



Signal word **Danger**

**Hazard statement(s):** H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation.

**Precautionary statement(s):** P261 Avoid breathing dust/fume/gas/mist/vapours/spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. 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 CENTER or doctor/physician.

**Hazard symbol(s):** **C Corrosive**

**R-phrases(s):** R34 Causes burns. R37 Irritating to respiratory system.

**S-phrases(s):** S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

**2.3 Other hazards** – no data available

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1 Substances

##### Hydrochloric acid

Formula: **HCl**  
CAS-No.: **7647-01-0**  
EC-No.: **231-595-7**  
Index-No.: **017-002-01**

##### Water

CAS-No.: **452-67-5**  
EC-No.: **207-205-6**  
Index-No.: **-**

#### 3.2 Mixtures

Component	Classification	Concentration
<b>Hydrochloric acid</b>	X Skin Corr. 1B; STOT SE 3; H314, H335 C, R34 - R37	37%
<b>Water</b>	-	63%

### 4. FIRST AID MEASURES

#### 4.1 Description of first aid measures

**General advice:** Consult a physician. Show this safety data sheet to the doctor in attendance.

**If inhaled:** If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact:** Take off contaminated clothing and shoes immediately. Wash off with soap and plenty of water.

**In case of eye contact:** Rinse thoroughly with plenty of water for at least 15 minutes

**If swallowed:** Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.

**4.2 Most important symptoms and effects, both acute and delayed:** no data available

**4.3 Indication of immediate medical attention and special treatment needed:** no data available

## 5. FIRE-FIGHTING MEASURES

### 5.1 Extinguishing media

**Suitable extinguishing media:** Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

**5.2 Special hazards arising from the substance or mixture:** no data available

**5.3 Precautions for fire-fighters:** Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information:** The product itself does not burn.

## 6. ACCIDENTAL RELEASE MEASURES

**6.1 Personal precautions, protective equipment and emergency procedures:** Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

**6.2 Environmental precautions:** Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up:** Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

**6.4 Reference to other sections:** For disposal see section 13.

## 7. HANDLING AND STORAGE

**7.1 Precautions for safe handling:** Avoid inhalation of vapour or mist.

**7.2 Conditions for safe storage, including any incompatibilities:** Store in cool place. Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

**7.3 Specific end uses:** no data available.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### 8.1 Control parameters

#### Components with workplace control parameters

Component	CAS No.	Value	Control Parameters	Update
Hydrochloric Acid	7647-01-0	TWA	5ppm 8mg/m <sup>3</sup>	2000-06-16
Hydrochloric Acid	7647-01-0	STEL	10ppm 15mg/m <sup>3</sup>	2000-06-16
Hydrochloric Acid	7647-01-0	TWA	1ppm 2mg/m <sup>3</sup>	2005-04-06
Hydrochloric Acid	7647-01-0	STEL	5ppm 8mg/m <sup>3</sup>	2005-04-06

Commission Directive 2000/39/EC establishing a first list of indicative occupational exposure limit values  
Remarks Indicative

UK. EH40 Occupational Exposure Limits

### 8.2 Exposure controls

**Appropriate engineering controls:** Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection:** Tightly fitting safety goggles. Faceshield (8-inch minimum).

**Skin protection:** The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it. Handle with gloves.

**Body Protection:** Choose body protection according to the amount and concentration of the dangerous substance at the work place.

**Respiratory protection:** Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**9. PHYSICAL AND CHEMICAL PROPERTIES**

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

- |  |  |  |
|--|--|--|
| a) Appearance:                                   | <b>Form:</b> Liquid                            | <b>Colour:</b> Yellow                  |
| b) Odour:  | Pungent  |  |
| c) Odour Threshold:                              | no data available                              |  |
| d) pH:   | no data available                              |  |
| e) Melting/freezing point:                       | 30 °C  | Melting point/range: no data available |
| f) Initial boiling point and boiling range:      | 100 °C   |  |
| g) Flash point:                                  | no data available                              |  |
| h) Evaporation rate:                             | no data available                              |  |
| i) Flammability (solid, gas):                    | no data available                              |  |
| j) Upper/lower flammability or explosive limits: | no data available                              |  |
| k) Vapour pressure:                              | 226.636 hPa at 21.1 °C, 546.596 hPa at 37.7 °C |  |
| l) Vapour density:                               | no data available                              |  |
| m) Relative density:                             | 1.2 g/mL at 25 °C                              |  |
| n) Water solubility:                             | Soluble  |  |
| o) Partition coefficient: n-octanol/water:       | no data available                              |  |
| p) Autoignition temperature:                     | no data available                              |  |
| q) Decomposition temperature:                    | no data available                              |  |
| r) Viscosity:                                    | dynamic 2.3 mPa.s at 15 °C                     |  |
| s) Explosive properties:                         | no data available                              |  |
| t) Oxidizing properties:                         | no data available                              |  |

**9.2 Other safety information:** no data available

**10. STABILITY AND REACTIVITY**

**10.1 Reactivity:** no data available

**10.2 Chemical stability:** Stable under recommended storage conditions.

**10.3 Possibility of hazardous reactions:** no data available

**10.4 Conditions to avoid:** no data available

**10.5 Incompatible materials:** Bases, Amines, Alkali metals, Metals, permanganates, e.g. potassium permanganate, Fluorine, metal acetylides, hexalithium disilicide

**10.6 Hazardous decomposition products:** Hazardous decomposition products formed under fire conditions. - Hydrogen chloride gas

## 11. TOXICOLOGICAL INFORMATION

### 11.1 Information on toxicological effects

**Acute toxicity:** LD50 Oral - rabbit - 900 mg/kg (Hydrochloric acid)

LC50 Inhalation - rat - 1 h - 3124 ppm (Hydrochloric acid)

**Skin corrosion/irritation:** no data available

**Serious eye damage/eye irritation:** no data available

**Respiratory or skin sensitization:** no data available

**Germ cell mutagenicity:** no data available

**Carcinogenicity:** IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

**Reproductive toxicity:** no data available

**Specific target organ toxicity - single exposure:** May cause respiratory irritation.

**Specific target organ toxicity - repeated exposure:** no data available

**Aspiration hazard:** no data available

### Potential health effects

**Inhalation** May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

**Ingestion** May be harmful if swallowed. Causes burns.

**Skin** May be harmful if absorbed through skin. Causes skin burns.

**Eyes** Causes eye burns.

**Signs and Symptoms of Exposure:** burning sensation, Cough, wheezing, laryngitis, Shortness of breath, spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

**Additional Information:** RTECS: MW4025000

## 12. ECOLOGICAL INFORMATION

**12.1 Toxicity:** Toxicity to fish LC50 - *Gambusia affinis* (Mosquito fish) - 282 mg/l - 96 h

**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:** no data available

**12.6 Other adverse effects:** no data available

### 13. DISPOSAL CONSIDERATIONS

#### 13.1 Waste treatment methods

**Product:** Observe all federal, state, and local environmental regulations. Contact a licensed professional waste disposal service to dispose of this material.

**Contaminated packaging:** Dispose of as unused product.

### 14. TRANSPORT INFORMATION

#### 14.1 UN-Number

ADR/RID: 1789 IMDG: 1789 IATA: 1789

#### 14.2 UN proper shipping name

ADR/RID: HYDROCHLORIC ACID

IMDG: HYDROCHLORIC ACID

IATA: HYDROCHLORIC ACID

#### 14.3 Transport hazard class(es)

ADR/RID: 8 IMDG: 8 IATA: 8

#### 14.4 Packaging group

ADR/RID: II IMDG: II IATA: II

#### 14.5 Environmental hazards

ADR/RID: no IMDG Marine pollutant: no IATA: no

**14.6 Special precautions for users:** EMS-No: F-A, S-B

### 15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

#### 15.2 Chemical Safety Assessment

no data available

### 16. OTHER INFORMATION

H314 Causes severe skin burns and eye damage. H335 May cause respiratory irritation. Skin Corr. Skin corrosion. STOT SE Specific target organ toxicity - single exposure. C Corrosive. R34 Causes burns. R37 Irritating to respiratory system.