

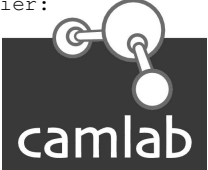
## 1. Identification

Product Code 1111621

Product Name **HYDROCHLORIC ACID 4.0M (4N) A.R.**

CAS Number 7647-01-0

Supplier: **CAMLAB LIMITED**  
**Norman Way Industrial Estate**  
**Over**  
**Cambridge**  
**England**  
**CB4 5WE**



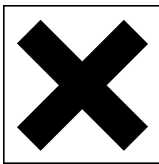
Phone 01954 233110  
 Fax 01954 233101

Emergency Telephone 08:00–17:00 01954 233110  
 24hr 112  
 (Have this document to hand)

## 2. Composition

Component	CAS No	EEC No	Conc w/w	Classification & Risk Phrases	Exp (See 8.1)
Hydrochloric acid	7647-01-0	231-595-7	14.6%	Xi : R34,R37	WEL

## 3. Hazards Identification



Irritating to eyes, respiratory system and skin.

## 4. First Aid Measures

Eyes Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. OBTAIN MEDICAL ATTENTION.

Skin Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use. In severe cases or if exposure has been great, OBTAIN MEDICAL ATTENTION.

Inhalation Remove from exposure.

Ingestion Wash out the patients mouth thoroughly with water. OBTAIN MEDICAL ATTENTION URGENTLY.

## 5. Fire Fighting Measures

Hazards Presents no specific fire danger.

Extinguishing Media Consider what other flammable materials are present and act accordingly.

Unsuitable Media Nothing specified.

## 6. Accidental Release Measures

Personal Protection Use approved personal protective equipment. Evacuate area immediately. Do not allow general use of area until it is safe to do so.

Environmental Keep non-neutralised material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

Major Spillage Contain and absorb on inert material. Transfer absorbent to salvage container for removal. Wash area down with copious amounts of water.

## 6. Accidental Release Measures (continued)

Minor Spillage Neutralise spill with soda ash, lime, calcium carbonate or sodium bicarbonate. Wash area down with copious amounts of water.

## 7. Storage & Handling

Handling Precautions Avoid contact with skin and eyes. Do not breath vapours. Do not allow to contaminate clothing.

Ensure Local Exhaust Ventilation maintains vapour concentrations below the recommended limits.

Storage Conditions Well ventilated, cool, dry storage .

## 8.1 Workplace Exposure Limits

Component	CAS No	Workplace Exposure Limits				Maximum Exposure Limits			
		Long Term		Short Term		Long Term		Short Term	
		ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>	ppm	mg m <sup>-3</sup>
Hydrochloric acid	7647-01-0	1.000	2.000	5.000	8.000	-	-	-	-

## 8.2 Personal Protection

Respiratory Use L.E.V. or natural ventilation to maintain vapour concentrations below exposure limits. If not, use a well maintained chemical cartridge respirator, or use self contained breathing apparatus.

Hands Use nitrile gloves or PVC gauntlets.

Eyes Use chemical splash proof glasses or goggles.

Skin If skin contact or contamination of clothing is likely, protective clothing must be worn.

## 9. Physical & Chemical Properties

Appearance Clear colourless liquid.

Odour Odourless.

pH 1 @ 20 °C

Boiling point 103.0 °C

Melting point 15.0- °C

Flash point Not available

Upper Flammable Limit Not available

Lower Flammable Limit Not available

Auto Ignition Not available

Explosive properties No.

Oxidising Properties No.

Vapour Pressure Not available

Relative Density 1.0674 °C

Water Solubility Completely miscible in water.

## 10. Stability & Reactivity

Chemical Stability Stable under normal conditions

Conditions to Avoid No specific conditions.

Materials to Avoid Alkalis. Potassium permanganate. Reacts with most metals to produce extremely flammable hydrogen gas.

Hazardous Will decompose to emit toxic and irritant fumes of hydrogen chloride.

Decomposition Products

## 11. Toxicological Information

Eyes The liquid is irritating to the eyes but unlikely to cause serious injury.

Skin The liquid will be an irritant on brief or occasional exposure. May cause burns on prolonged contact.

## 11. Toxicological Information (continued)

LD50 Skin	Not available
Ingest	Ingestion of large amounts may produce severe mouth burns, and if swallowed extensive damage to the oesophagus. Symptoms may include salivation, thirst, difficulty in swallowing, pain, shock and vomiting.
LD50 Ingest	Not available
Inhalation	Presents no significant health hazard by inhalation.
Carcinogenicity	Not considered to be a carcinogen.
Mutagenicity	Not considered to be a mutagen.
Reproductive Effects	None identified.
Other Information	5-10ppm is the threshold for irritation with severe irritation occurring at 50-100 ppm.

## 12. Ecological

Neutralised material presents no specific environmental hazard.

## 13. Disposal Considerations


Disposal Methods	Dilute in a large excess of water and carefully neutralise with soda ash, then wash to drain with copious amounts of water.
Contaminated Packaging	Carefully neutralise with a weak sodium hydroxide solution then wash out thoroughly with water. Use a licensed waste disposer.

## 14. Transport Information

Proper Shipping Name	Hydrochloric Acid
UN Number	1789
UN Classification	8 Corrosive
Subsidiary Risk	None
Flash Point	Not available
Packing Group	II
Transport Category	2
Marine pollutant	No
ADR Hazard ID	80



## 15. Regulatory Information

Labelling	Irritant.
Classification	
Label Symbols	Xi 
Risk & safety Phrases	Irritating to eyes, respiratory system and skin. Keep locked up and out of reach of children. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. In case of accident or if you feel unwell, seek medical advice immediately (show the label).
EEC Number	231-595-7

## 16. Other Information

Document Information	This document has been prepared in accordance with directive 88/379/EEC.
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## 16. Other Information (continued)

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment.

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Data reviewed and PDF file generated: 17/03/10.

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