Camlab Limited – Material Safety Data Sheet 1111621

1. Identification

Product Code **1111621**

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

CAS Number **7647-01-0**

Supplier: **CAMLAB LIMITED**

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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.

Enviromental: 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–3	ppm	mg m–3	ppm	mg m–3	ppm	mg m–3
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 Presure	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 Decomposition Products	Will decompose to emit toxic and irritant fumes of hydrogen chloride.

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 Classification	Irritant.
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.

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.

Revision Date: 21/02/06.
Data reviewed and PDF file generated: 17/03/10.