

Infosafe No™ HC03H Issue Date : June 2010 ISSUED by HYDROCHM CS: 1.4.22

Product Name **4X**

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name 4X

Company Name Hydro-Chem Pty Ltd

Address 27 Viking Court Cheltenham
VIC 3192

Telephone/Fax Number Tel: (03) 9553 1011
Fax: (03) 9553 1387

Recommended Use THIS IS A CONCENTRATED FORMULATION. DO NOT USE UNDILUTED. Using the dilution scale on the side of the container as a guide, dilute appropriately for equipment to be cleaned. Apply with a low pressure sprayer, using a coarse spray pattern to avoid misting. Allow cleaning solution to react for 3 to 4 minutes; rinse thoroughly with water.

Other Names Name Product Code

4X Coil Cleaner ,
Coil Cleaner Concentrate
4X Coil Cleaner Base
Coil Cleaning Concentrate
XXXX Coil Cleaner

2. HAZARDS IDENTIFICATION

Hazard Classification HAZARDOUS SUBSTANCE.
DANGEROUS GOODS.
Hazard classification according to the criteria of NOHSC.
Dangerous goods classification according to the Australia Dangerous Goods Code.

Risk Phrase(s) R35 Causes severe burns.

Safety Phrase(s) S1/2 Keep locked up and out of reach of children.
S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
S36/39 Wear suitable protective clothing and eye/face protection.
S45 In case of accident or if you feel unwell seek medical advice immediately

Other Information Highly corrosive to all body tissue. Considered to be highly toxic via all exposed routes. Prolonged contact with dilute solutions has been shown to have a destructive effect on the tissue. Contact dermatitis may result from working with the material.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Characterization Liquid

Information on Composition All ingredient in this product are listed on the Australian Inventory of Chemical Substances (AICS).

Ingredients	Name	CAS	Proportion
	Potassium hydroxide	1310-58-3	10-30 %
	Sodium hydroxide	1310-73-2	10-30 %

4. FIRST AID MEASURES

Inhalation Non-volatile. Remove victim from exposure - avoid becoming a casualty. For all but the most minor symptoms arrange for patient to be seen by a doctor as soon as possible - either on site or at the nearest hospital.

Ingestion Rinse mouth thoroughly with water immediately. Give water or milk to drink. DO NOT induce vomiting. If vomiting occurs give further water to achieve effective dilution. Seek immediate medical assistance.

Skin Wash affected areas with copious quantities of water immediately. Remove contaminated clothing and rinse the contaminated skin area. Wash clothes before reuse. If swelling, redness, blistering or irritation occurs seek medical advice.

Eye Immediately irrigate with copious quantity of water for at least 15 minutes. Eyelids to be held open. Urgently seek medical assistance.

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First Aid Facilities Transport to hospital or medical centre. Provide general supportive measures (comfort, warmth, rest). Consult a physician and/or the nearest Poison Control Centre for all exposures except minor instances of inhalation or skin contact.

Advice to Doctor Treat symptomatically as for strong alkalis.

5. FIRE FIGHTING MEASURES

Fire Fighting Measures As in any fire, wear an approved self-contained breathing apparatus in pressure-demand, and full protective gear.

Specific Hazards Not combustible.
Extinguish fire with the following: foam.
carbon dioxide.
water spray.
dry chemical powder or BCF.

Hazchem Code 2X

6. ACCIDENTAL RELEASE MEASURES

Spills & Disposal Evacuate unprotected personnel from danger area. Wear appropriate protective clothing. Slippery when spilt. Avoid accidents, clean up immediately. Contain using sand and earth - prevent runoff into drains and waterways. Use absorbent (soil or sand, sawdust, inert material, vermiculite). Collect and seal in properly labelled drums for disposal. Neutralise remaining product with dilute acid, adjusting pH to 6-10. Wash area down with excess water. Refer to State Land Waste Management Authority. Caution - heat will be involved. Empty containers must be decontaminated and destroyed.

7. HANDLING AND STORAGE

Additional information on precautions for use Always use good occupational work practices. Extremely slippery when spilt. HIGHLY CONCENTRATED FORMULATION - ALWAYS MIX WITH WATER BEFORE USE. Do not mix with other chemical products.

Other Information -----DO NOT USE UNDILUTED-----
Exothermic reaction on dilution with water. Extremely slippery when wet.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards For potassium hydroxide and sodium hydroxide - TLV, 2.0 mg/m³ -Ceiling Value As published by the National Health & Medical Research Council. Ceiling Value - Is the concentration that should not be exceeded even instantaneously. TLV is the time weighted average concentration of the work atmosphere over a normal 8-hour work day and a 40-hour work week. Nearly all workers may be repeatedly exposed to this level, day after day, without adverse effect. These TLVs are issued as guidelines for good practice. All atmospheric contamination should be kept to as low a level as is practically possible. These TLVs should not be used as fine lines between safe and dangerous concentrations.

Engineering Controls Use with adequate ventilation. Avoid generating and inhaling mists or vapours.

Personal Protective Equipment Avoid all contact. The following personal protective equipment must be worn; safety glasses, goggles or faceshield as appropriate; impervious gloves; rubber boots; splash apron and overalls or similar protective apparel. Disconnect power from equipment prior to cleaning. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and protective equipment before storing/re-using.

9. PHYSICAL AND CHEMICAL PROPERTIES

Form Liquid

Appearance Dark straw coloured strongly alkaline liquid. Hygroscopic. Miscible with water. Exothermic reaction on dilution with water.

Boiling Point Not Allocated

Specific Gravity 1.35-1.45 @ 20°C (approx)

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pH Value	12-14
Vapour Pressure	Not Allocated
Flash Point	Not Allocated
Flammability	Non flammable.
Flammable Limits - Lower	Not Allocated
Other Information	Solubility in water - Soluble.

10. STABILITY AND REACTIVITY

Hazardous Reactions The substance is a strong base and reacts violently with acids. The concentrated form attacks aluminium, zinc and tin forming combustible gas (hydrogen). Reacts with ammonium salts generating ammonia gas. Absorbs water and carbon dioxide from the air. Vigorous exothermic reaction on dilution with water.

11. TOXICOLOGICAL INFORMATION

Toxicology Information KNOWN TOXICOLOGICAL DATA:
 Potassium hydroxide toxicity: oral LD50 (rat)- 365mg/kg
 Low system toxicity
 Sodium hydroxide toxicity: ipLD50 (mice) = 40 mg/kg [for solid]
 oral LDLO (rabbit) = 500 mg/kg [10% solution]
 Low system toxicity

Inhalation Inhalation of mists or aerosols will result in respiratory irritation and possible corrosive effects including lesions of the nasal septum, pulmonary oedema, pneumonitis and emphysema.

Ingestion Can kill if swallowed.
 Corrosive to mucous membranes. Ingestion may result in pain, nausea, vomiting, swelling of the larynx and subsequent suffocation, perforation of the gastrointestinal tract, cardiovascular collapse and coma.

Skin Highly corrosive to skin and any tissue with which it comes into contact. Produces burns, deep ulceration and gelatinous necrotic areas at the site of contact. Skin contact can result in little pain, thus care should be taken to avoid contamination of gloves and boots during use. Repeated or prolonged skin contact may lead to dermatitis effects.

Eye Highly corrosive to eyes.
 Corrosive to eyes; contact can cause corneal burns. Can cause conjunctivitis, corneal burns and ulceration. Contamination of eyes can result in permanent injury. Permanent eye damage, including loss of sight.

Chronic Effects No data supplied.

12. ECOLOGICAL INFORMATION

Environ. Protection Avoid contaminating waterways.
 Harmful to aquatic life.
 For potassium hydroxide and sodium hydroxide - TLM 96: 100-10 ppm.
 This substance may be hazardous to the environment; special attention should be given to the prevention of spills and the correct clean-up procedures.

13. DISPOSAL CONSIDERATIONS

Waste Disposal Refer to State Land Waste Management Authority or a Licensed disposal contractor for disposal.
 Empty containers must be decontaminated, rinse with water before landfill disposal.

14. TRANSPORT INFORMATION

U.N. Number	1760
DG Class	8
Hazchem Code	2X

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Packaging Method 3.8.8

Packing Group II

Storage and Transport UN No. 1760 (II)
 Keep containers closed at all times. Store away from acids. Do not use aluminium or galvanized containers or use die-cast zinc or aluminium bungs. Steel bungs should be used.
 Class 8 Corrosives shall not be loaded in the same vehicle with:
 - Class 1 Explosives
 - Class 4.3 Dangerous when wet substances
 - Class 5.1 Oxidizing agents
 - Class 5.2 Organic peroxides
 Observe the requirements of the Australian Code for the transport of dangerous goods by road and rail.
 Check regularly for spills and leaks.

IERG Number 37

15. REGULATORY INFORMATION

Poisons Schedule S6

Packaging & Labelling 1 and 5 litre HDPE (high density polyethylene) D.G. approved containers. As required by the ADG Code and the Standard for the Uniform Scheduling of Drugs and Poisons.

Hazard Category Corrosive

16. OTHER INFORMATION

Contact Person/Point Normal Working Hours - Ph: (03) 9553 1011 Fax: (03) 9553 1387
 Ask for the Facilities Manager, Sales Manager or Services Manager.
 After Hours - Ph : 1300 558 788

Further information/advice is available to those persons responsible for the design of safe work practices on their written request to HydroChem. This MSDS summarises to the best of our knowledge at the date of issue, the health and safety hazard information of the selected substance and how to safely handle the selected substance in the workplace. Each user should read this MSDS and consider the information in the context of how the product will be handled and used in the workplace, including in conjunction with other products.
 Hydro-Chem Pty Ltd responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request. If clarification or further information is required, the user should contact Hydro-Chem Pty Ltd using the contact details provided.

Other Information ABBREVIATIONS:
 ACGIH - American Conference of Government Industrial Hygienists
 OSHA - Occupational Safety and Health Information
 TLV - Threshold Limit Value
 NOHSC - National Occupational Health & Safety Committee
 Hydro Balance is a range of products developed and manufactured by Hydro-Chem fro the preventative maintenance of air conditioning and refrigeration systems.
 ...End Of MSDS...

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