

MATERIAL SAFETY DATA SHEET

SECTION 1 – IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product Name	DERKET
Manufacturer's Product Code	0028
Other Names	Hydrochloric acid based cleaner and descaler.
Major Recommended Uses	For the cleaning of scale, lime cement and other inorganic residue from walls, cement floors, cement trucks and mixers and for boiler and cooling tower scale removal.
Supplier's Details	Mantek 7 Ralph Street, Alexandria Sydney NSW 2015 Telephone Number (Office Hours): (02) 9669 0261 Fax Number: (02) 9693 1562 Emergency Telephone Number: (02) 9214 0755
Date of Issue	June 2007

SECTION 2 – HAZARDS IDENTIFICATION

Hazard Classification	Classified as HAZARDOUS according to the criteria of NOHSC.
Dangerous Goods Class & Sub-risk	Class 8, no sub-risk.
Poisons Schedule	SCHEDULE 6
Risk Phrases	Corrosive. Irritant.
Safety Phrases	Keep out of reach of children Irritating to eyes, respiratory system and skin. In case of contact with eyes, rinse immediately with water and seek medical advice. In case of accidents or if you feel unwell, seek medical advice immediately (show the label whenever possible).

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

Ingredients		
Chemical Entity	CAS No	Proportion
Hydrochloric acid	7647-01-0	10%-30%
'INGREDIENTS DETERMINED NOT TO BE HAZARDOUS'		to 100%

SECTION 4 – FIRST AID MEASURES

Skin	Immediately remove contaminated clothing and flush affected skin and hair with running water. Get immediate medical attention if irritation develops. Wash clothing and clean shoes before reuse.
Eye	Immediately hold eyelids apart and flush the eye continuously with running water. Continue flushing for at least 15-minutes or until advised to stop by the Poisons Information Centre or a doctor. Get immediate medical attention.
Inhalation	Remove to fresh air. Seek medical attention if respiratory irritation develops or if breathing becomes difficult. If not breathing, clear the airway and start mouth to mouth artificial respiration.
Ingestion	If swallowed do not induce vomiting. Give water and call a doctor. If vomiting occurs, give fluids again. Get immediate medical attention
First Aid Facilities	An eye wash station and safety shower should be available.
Advice to Doctor	Probable mucosal damage may contraindicate the use of gastric lavage. Measures against circulatory shock, respiratory depression, and convulsions may be needed. There is no specific antidote. Treat the patient symptomatically.
Additional Information	Medical conditions aggravated by exposure are pre-existing respiratory and skin conditions such as asthma, emphysema and dermatitis. Target organs: none known. There is no primary route of entry into the body. The primary routes of exposure are skin and eye contact.

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SECTION 5 – FIRE FIGHTING MEASURES

DERKET is non-flammable.	
Suitable Extinguishing Media	In the event of a fire, powder, foam, water spray and CO ₂ are the recommended extinguishing agents. Extinguishing media should be chosen based on the nature of the surrounding fire. Note that the water spray, whilst effective, may cause frothing and foaming.
Special Protective Equipment and Precautions for Fire Fighters	Fire fighters should wear self-contained breathing apparatus and full protective gear. Cool fire-exposed containers with water spray to prevent bursting.
Fire/Explosive Hazards	Prolonged contact with reactive metals such as aluminium, zinc, magnesium, and copper can cause the formation of hydrogen gas which can form an explosive mixture with air. Hydrogen chloride gas may be released when heated.
Hazchem Code	2R

SECTION 6 – ACCIDENTAL RELEASE MEASURES

Wear appropriate protective clothing. Floor may be slippery.	
Methods and Materials for Containment and Clean Up	Contain spill if it safe to do so and ventilate the area. Prevent product from contaminating soil or entering sewerage and drainage systems and bodies of water. Clean up the spill with inert absorbent materials. Cautiously neutralise with sodium bicarbonate or soda ash. Dispose of waste in a closed, labelled container in accordance with local, state and Federal law. If a large volume has been spilt, evacuate all personnel and only allow intervention by trained operators equipped with safety apparatus. Flush area with water to wash away residues.

SECTION 7 – HANDLING AND STORAGE

Precautions for Safe Handling	Observe precautions stated on product label, and follow industry safety regulations. Smoking, eating and drinking should be prohibited where the preparation is used. The product must not come into contact with skin and eyes, and the drum should never be opened under pressure. When diluting with water, slowly add the product to the water.
Conditions for Safe Storage	Store in a dry, well-ventilated area in an upright position in original container. Store below 49°C. Equipment made from reactive metals such as aluminium should not be used for storage or transfer of this product. Do not store near alkali.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Standards	None allocated for mixture. (Hydrogen chloride has a TWA of 5ppm.)
Engineering Controls	Local ventilation is recommended to control exposure from operations that can generate excessive levels of mists.
Personal Protective Equipment	
Eye/Face Protection	If splashing is likely/possible, chemical goggles or a face shield should be worn. AS1336 and AS/NZS1337 –‘Eye Protectors for Industrial Applications’ should be consulted for information on eye protection.
Skin Protection	Neoprene or nitrile rubber gloves should be worn along with protective clothing when handling this product. Protective creams may be used for exposed skin, but they should not be applied after contact with the product. Refer to AS/NZS 2161 –‘Occupational Protective Gloves - Selection, Use and Maintenance’ for information on glove selection.
Respiratory Protection	If misting is likely to occur, an approved inorganic vapour respirator should be used. A half-facepiece respirator equipped with appropriate cartridge is suitable at concentrations up to 10-times the TLV. Reference should be made to Australian Standards AS/NZS 1715 – ‘Selection, Use and Maintenance of Respiratory Protective Devices’; and AS/NZS 1716 – ‘Respiratory Protective Devices.’

SECTION 9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	Light amber, non-viscous, free-flowing liquid with a hydrochloric acid odour
pH (100% solution)	<1.0
Vapour Pressure	20mm Hg
Vapour Density	0.8 (Air = 1)
Boiling Point	104°C
Melting Point	Not applicable
Solubility in Water (g/L)	Complete
Specific Gravity	1.08 – 1.10
Flashpoint	NON FLAMMABLE
% Volatiles by Volume	99%
Evaporation Rate	0.1 (BU A/C = 1)

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SECTION 10 – STABILITY AND REACTIVITY

Stability	Stable.
Hazardous Polymerisation	Will not occur.
Conditions/Materials to Avoid	Avoid strong oxidising agents such as chlorine bleach and concentrated hydrogen peroxide; bases; cyanide; lithium silicide; metals; mercuric sulphate; perchloric acid; carbides of calcium; caesium, rubidium and acetylides of caesium and rubidium; phosphides of calcium and uranium; amines; carbonates; cyanides; metallic oxides; sulphides. Prolonged contact with reactive metals, such as aluminium, copper, brass, bronze, chromium, magnesium, tin, zinc, and alloys can cause the formation of flammable hydrogen gas which can form an explosive mixture with air
Hazardous Decomposition Products	Hydrogen chloride.

SECTION 11 – TOXICOLOGICAL INFORMATION

Health Effects:	
Acute - Swallowed	CORROSIVE. Causes burns to the lips, mouth, throat, oesophagus and stomach with nausea and pain. Symptoms may include vomiting of blood
Acute - Eye	CORROSIVE. Causes burns, corneal damage and possible blindness.
Acute - Skin	CORROSIVE. Causes burns and possible deep ulceration and scarring.
Acute - Inhaled	Causes burns to the respiratory tract, nose, mouth and throat, with discomfort, nasal discharge, sneezing, coughing, rapid heartbeat and chest pain. Inhalation of mist or vapours from heated product may cause chemical pneumonitis.
Chronic	Chronic skin contact or repeated exposures may promote dermatitis and ulceration. Chronic or repeated inhalation of mist or vapours may cause laryngitis, bronchitis and glottal and/or pulmonary edema. Dental discolouration and erosion of exposed teeth may occur on prolonged exposure to low concentrations of hydrogen chloride vapours. May cause broncho-pneumonia, chemical pneumonitis and delayed scarring of the airway.
Target Organs	None known.
Product Contains Chemicals Listed as Carcinogens by	International Agency for the Research of Cancer (IARC): NO Other: NO

SECTION 12 – ECOLOGICAL INFORMATION

The product can lower the pH of water. Low pH levels can harm aquatic organisms.	
Ecotoxicity:	HYDROCHLORIC ACID, 35% GAMBUSIA AFFINIS 96HR LC ₅₀ : 282 mg/L DAPHNIA MAGNA 72HR LC ₅₀ : 56 mg/L BLUEGILL 48H LC50: 3.6 mg/L
Persistence/Degradability:	The product is water-based, inorganic, and is biodegradable. It readily dissociates in the environment.
Mobility in Soil	The product is water-soluble and will readily dissolve in water into the soil. The product is non-volatile and will partition to the aqueous phase.

SECTION 13 – DISPOSAL CONSIDERATIONS

The used product can be drained to sewage if it does not contain hazardous materials and the pH is neutral (typically between 5.5 – 9). The packaging can be re-used after rinsing or recycled or burnt. Before rinsing, empty containers may contain product residues that exhibit the hazards of the bulk product.

SECTION 14 – TRANSPORT INFORMATION

UN Number	UN1789
UN Proper Shipping Name	Hydrochloric acid solution
Transport Hazard Class	Corrosive. ADG Class 8, no sub-risk.
Packaging Group	Group II
Hazchem Code	2R
Marine Pollutant	No

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SECTION 15 - REGULATORY INFORMATION



Poisons Schedule: SCHEDULE 6

SECTION 16 – OTHER INFORMATION

Initial copy of 16-header MSDS.

Since the user's working conditions are not known by the supplier, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations. The product must not be used for any purposes other than those specified in Section 1 without first obtaining written handling instructions. MANTEK assumes no responsibility for personal injury or property damage caused by the use, storage, or disposal of the product in a manner not recommended on the product label. Users assume all risks associated with such non-recommended use, storage or disposal of the product. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations. The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties.