

MATERIAL SAFETY DATA SHEET

Decalcifier

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STATEMENT OF HAZARDOUS NATURE

Hazardous according to criteria of Worksafe Australia

COMPANY DETAILS

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IDENTIFICATION SECTION

Product Name	Decalcifier
Other Names	Bone decalcifier
Product Code	ADECA-500
U.N. Number	1789
Dangerous Goods Class and Subsidiary Risk	8
Hazchem Code	None allocated
Poison Schedule	2R
Use	S5 Used in hospital and pathology laboratories only

Physical Description and Properties

Appearance	Clear liquid
Boiling Point/Melting Point	100oC / 0oC
Vapour Pressure	25hPa @ 20oC
Specific Gravity	1.01
Flash Point	
Flammability Limits	Not determined
Solubility in water	Soluble in all proportions

Other Properties

Ingredients

Chemical Name	CAS Number	Proportion
HYDROCHLORIC ACID	7647-01-0	9%
WATER AND OTHER NON-HAZARDOUS SUBSTANCES	Mixture	91%

HEALTH HAZARD INFORMATION

Health Effects:

Acute

- Swallowed:** Will cause burns to the mouth, mucous membranes, throat, oesophagus and stomach. If sufficient quantities are ingested (swallowed) death may occur.
- Eye:** Will cause burns to the eyes with effects including: Pain, tearing, conjunctivitis and if duration of exposure is long enough, blindness will occur.
- Skin:** Will cause burns to the skin, with effects including: Redness, blistering, localised pain and dermatitis.
- Inhaled:** Mists or vapours will cause severe irritation to the nose, throat and respiratory system with effects including: Dizziness, headache, coughing, loss of co-ordination, tightening of chest, chest pains and possible pulmonary oedema.

Chronic:

Prolonged or repeated skin contact will lead to necrosis (death) of the skin.

First Aid:

- Swallowed:** If swallowed, DO NOT induce vomiting. Give plenty of water to drink. Seek urgent medical assistance.
- Eye:** If material is splashed into eyes, flush with plenty of water for at least 15 minutes, ensuring eye lids are held open. URGENTLY transport to hospital or doctor.
- Skin:** If material is splashed onto the skin, remove any contaminated clothing and wash skin thoroughly with water and soap. Immediately transport to hospital or doctor.
- Inhaled:** Remove victim to fresh air. Do not use mouth-to-mouth method if victim inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Administer oxygen if breathing is difficult.
- First Aid Facilities:** Eye wash fountain, safety shower and normal wash room facilities.

Advice to Doctor

Due to the potential for esophageal or gastrointestinal tract burns following ingestion, emesis should not be induced and gastric lavage done only with caution. Immediate dilution with water or milk might be beneficial. Do not give sodium bicarbonate in an attempt to neutralize the acid.

PRECAUTIONS FOR USE

Exposure Standards:

No exposure standards are available for this product, however, the following exposure standards have been assigned by the National Occupational Health & Safety Commission (NOHSC) to the following components of the product:

HYDROCHLORIC ACID
(Worksafe Australia)
[TWA]5 ppm 7.5 mg/m³
[STEL]Peak limitation

References: H

(ACGIH)
[STEL]5 (Ceiling) 7.5 (Ceiling)

Engineering Controls:

Corrosive liquid. Single significant exposure may cause severe injury or even death. Maintain adequate ventilation at all times. Prevent accumulation of vapours in hollows or sumps. Eliminate any sources of ignition. Keep away from non-ferrous metals (zinc, magnesium and aluminium and their alloys). Exposure to this material may be controlled in a number of ways. The measures appropriate for a particular worksite depend on how the material is used and on the potential for exposure. Engineering methods to prevent or control exposure are preferred. Methods include process or personnel enclosure, mechanical

ventilation (dilution and local exhaust), and control of process conditions. If engineering controls and work practices are not effective in preventing or controlling exposure, then suitable personal protective equipment, which is known to perform satisfactorily, should be used.

Personal Protection:

CLOTHING: PVC or Nitrile apron.

GLOVES: Nitrile.

EYES: Chemical goggles or faceshield to protect eyes.

RESPIRATORY PROTECTION: Avoid breathing of vapours. Select and use respirators in accordance with AS/NZS 1715/1716. When the concentration of airborne contaminants reach the exposure standards then the use of a half-face respirator with acid vapour cartridge is recommended. For high concentration use a atmosphere-supplied, positive pressure demand self-contained or airline breathing apparatus supplied air respirator complying with the requirements of AS/NZS 1715 is recommended. Filter capacity and respirator type depends on exposure levels and type of contaminant.

If entering spaces where the airborne concentration of a contaminant is unknown then the use of a Self-contained breathing apparatus (SCBA) with positive pressure air supply complying with AS/NZS 1715 / 1716, or any other acceptable International Standard is recommended. The use of fully-encapsulating, gas-tight suit is also recommended.

Flammability:

This product is not flammable or combustible. However, if the product is spilt onto non-ferrous metals such as aluminium, zinc, magnesium or their alloys, then flammable and potentially explosive hydrogen gas will be generated.

SAFE HANDLING INFORMATION

Storage and Transport:

Store in a cool place and out of direct sunlight. Store away from sources of heat or ignition, alkalis, non-ferrous metals such as aluminium, magnesium, zinc and their alloys. All equipment must be earthed. Store in original packages as approved by manufacturer. Check all fittings, valves, reticulation (piping) and any ancillary equipment for leaks. A supplied air respirator or a Self-Contained Breathing Apparatus (SCBA) for emergencies should be available and checked regularly. For further information please refer to the Engineering Controls of this MSDS.

Spills and Disposal:

EMERGENCY ACTION:

Keep unnecessary people away; Isolate hazard area and deny entry. Stay upwind; Keep out of low areas. Wear appropriate eye, skin and respiratory protection as outlined in this MSDS. Caution, this material is corrosive.

SPILL OR LEAK PROCEDURE:

Remove all non-ferrous metals from area (aluminium, zinc and magnesium), if product has spilt on these metals immediately, flush them with plenty of water and shut off ignition sources, no smoking or flames in hazard area. Stop leak if you can do it without risk. Water spray may reduce vapour; but it may not prevent ignition in closed spaces.

SMALL SPILLS:

Take up with sand, dirt or vermiculite. DO NOT use sawdust. Use non-sparking tools. Place into labeled plastic drum(s) for later disposal.

LARGE SPILLS:

Notify Emergency Services (Police or Fire Brigade). Tell them exact location, nature, hazards, quantities, type of vehicle and any other information that would be helpful. Contain spill. Remove all ignition sources and safely stop flow of spill. Bund area. Trained personnel should wear Personal Protective equipment as highlighted in this MSDS. Blanket the spill with foam or use water fog to disperse vapour clouds. Consult an expert regarding disposal of this product.

Warning: Products that contain mineral acids must be kept away from non-ferrous metals, as extremely flammable hydrogen gas will be generated and if the appropriate flammability limits are reached and a source of ignition is present, a violent explosion will occur.

Fire/Explosion Hazard:

EXTINGUISHING MEDIA: Use dry chemical, carbon dioxide, foam or water

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fog.

SPECIAL FIRE FIGHTING PROCEDURES: Self-contained breathing apparatus (SCBA) required for fire-fighting personnel. If possible to do so safely, shut off fuel to fire. Use water spray to spray to cool fire-exposed surfaces and to protect personnel.

UNUSUAL FIRE AND EXPLOSION HAZARDS: If tanks, drums or containers of this material are heated, they may rupture and project corrosive liquids over a wide area.

OTHER INFORMATION

**Incompatibilities
(Materials to avoid)
Animal Toxicity Data:**

Strong alkalis/bases, aluminium, zinc, magnesium and their alloys and oxidizing agents.

The information published in this Material Safety Data Sheet has been compiled from data in various technical publications. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. We reserve the right to revise Material Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.