

**MATERIAL SAFETY DATA SHEET**  
**Hazardous according to criteria of Worksafe Australia**

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**Date of Issue : Nov 2000**

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**1. IDENTIFICATION**

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**General**

Product Name : ACETIC ACID SOLUTION, >80% acid by mass

Other Names : ETHANOIC ACID ; VINEGAR ACID ; METHANECARBOXYLIC ACID

UN No. : 2789

Dangerous Goods Class : 8

Subsidiary Risk : 3

Hazchem Code : 2P

Pack Group : II

EPG : 19

Poisons Schedule : 6

Uses :

Manufacturing of acetic anhydride, cellulose acetate, and vinyl acetate monomer; acetic esters; chloroacetic acid; production of plastics, pharmaceuticals, dyes, insecticides, photographic chemicals, etc., food additive (acidulant); latex coagulant; oil-well acidiser; textile printing.

**1.1 Physical Description / Properties**

Appearance : Colourless liquid, sharp odour.

Formula : CH<sub>3</sub>COOH

Boiling Point : 118 deg C

Melting Point : 16.6 deg C

Vapour Pressure : N/A

Specific Gravity : 1.27 (water = 1)

Flash Point : Open Cup 43

pH : 2.4 (1 molar soln in H<sub>2</sub>O)

Solubility in water : N/A g/l (25 deg C)

Flammability Limits (as percentage volume in air)

Lower Explosion Limit : 4

Upper Explosion Limit : 16

### 1.2 Other Properties

Miscible with water, alcohol, glycerol and ether; insoluble in carbon disulfide. Autoignition temperature = 426 deg C

### 1.3 Ingredients

Chemical Entity	CAS No.	Proportions (%)
ACETIC ACID	[ 64-19-7]	> 80

WATER	[ 7732-18-5]	< 20

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## 2. HEALTH HAZARD INFORMATION

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### 2.1 Health Effects - Acute

#### Swallowed

Will cause damage to the mucous membranes.

#### Eye

High concentrations of vapours will cause irritation. Liquid will cause burns. Contamination of eyes can result in permanent injury.

#### Skin

Causes burns. Contact with skin will result in severe irritation.

#### Inhaled

The vapour is an irritant to the mucous membranes and respiratory tract. May cause bronchitis, pneumonia and pulmonary oedema. Casualty may appear sweaty pale or slightly blue, have rapid breathing and cough up frothy sputum which may be pink or flecked with blood.

### 2.2 Health Effects - Chronic

No data available

### 2.3 First Aid

#### Swallowed

Drink 2 - 3 glasses of water and transport to hospital immediately.

### **Eye**

Irrigate with clean water for at least 15 minutes, retract eyelids often. Seek medical attention immediately.

### **Skin**

Flood exposed skin with water. Remove contaminated clothing then wash with soap and water thoroughly. Seek medical advice if effects persist.

### **Inhaled**

Move patient to fresh air. If breathing stops, start artificial respiration. Congestion of the lungs may occur any time after inhalation of fumes. If a conscious victim develops difficulty with breathing, and particularly if congestion of the lungs is suspected, they should be placed in the sitting up position and constantly observed for any change in behaviour, particularly the pulse or respiration, until medical help arrives. Congestion of the lungs is a serious complication and the casualty should be transferred to hospital as soon as possible.

### **First Aid Facilities**

Ensure an eye bath and safety shower are available and ready for use.

### **2.5 Advice to Doctor**

DO NOT use gastric lavage or emesis. Dilute the acid by drinking quantities of water or milk. If vomiting is persistent, administer fluids repeatedly.

### **2.6 Toxicity Data**

Oral LD50 = 3310 mg/kg (Rat) Dermal LD50 = 1060 mg/kg (Rabbit) Inhalation LD50 = 5620 ppm/1 hr (Mouse)

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## **3. PRECAUTIONS FOR USE**

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### **3.1 Exposure Standards**

The following exposure standards are recommended, however attempts should be made to reduce exposure to zero : TWA = 10 ppm (25 mg/m<sup>3</sup>) - Worksafe Australia STEL = 15 ppm (37 mg/m<sup>3</sup>) - Worksafe Australia

### **3.2 Engineering Controls**

Use local exhaust ventilation to maintain exposure below standards.

### **3.3 Personal Protection**

Ensure an eye bath and safety shower are available and ready for use. Workers should wear rubber footwear, overalls, PVC gloves and goggles. For any handling operation that may involve exposure by inhalation of vapour or aerosol spray, then approved respiratory protection should be worn. Remove all contaminated clothing after use and launder before reuse. Wash hands thoroughly before eating, drinking, smoking or using the toilet.

### **3.4 Flammability**

Material is flammable/combustible.

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## **SAFE HANDLING INFORMATION**

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### **4.1 Storage / Transport**

Store in separate, well-ventilated premises, with cement floors, away from oxidising agents, metals susceptible to attack and all sources of fire or ignition. Use retaining walls for risk of leakage.

### **4.2 Packaging / Labelling**

UN No. 2789

Class 8

Sub Risk 3

Hazchem Code 2P

Pack Group II

EPG No. 19

Shipping Name ACETIC ACID SOLUTION, >80% acid by mass

Hazard CORROSIVE

**Risk Phrases**

R10 Flammable.

R34 Causes burns.

**Safety Phrases**

S1/2 Keep locked up and out of the reach of children.

S23 Do not breathe vapour.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label whenever possible).

**4.3 Spills and Disposal**

**Spills**

Remove all sources of ignition. NO SMOKING. Clean up personnel should wear full protective clothing including rubber boots, gloves and goggles or face shield. Keep people away and upwind. If contamination of drains, streams, watercourses etc, is unavoidable warn the Local Water Authority immediately.

For small spills wash to drains with copious amounts of water. For large spills contain by surrounding and covering with inert absorbent materials eg sand, earth, vermiculite etc. Sweep up carefully and shovel into marked open-head containers. Spread more inert material over the entire spill area, sweep up and shovel sweepings into the marked container.

### **Disposal**

Wash contaminated area with detergent and water. Dispose of waste material in accordance with all Local, State and Federal regulations at an approved waste disposal site.

## **4.4 FIRE AND EXPLOSION HAZARD**

### **Fire / Explosion**

Spontaneous ignition temperature 430 deg C. Heating will cause pressure rise with risk of bursting containers. Incompatible with chromic acid, nitric acid, hydroxyl compounds, ethylene glycol, perchloric acid, peroxides, permanganates.

### **Extinguishing Media**

Use water or carbon dioxide, dry powder or carbon dioxide type extinguishers. Fire-exposed containers should be cooled with water spray. Use media-equipment appropriate to surrounding fire conditions. Fire-fighters should wear full protective equipment including self-contained breathing apparatus.

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## **5 OTHER INFORMATION**

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### **Other Information**

Disposal in drains is forbidden (risk of explosion, corrosion, pollution). If unavoidable only after neutralisation and dilution.

### **5.1 Contact Points**

Organisation	Location	Telephone	Ask For
Redox Chemicals Pty Ltd	Wetherill Park NSW	02-97255155	Technical Officer
Poisons Information Centre	Westmead	131129	
		1800-251525	