MATERIAL SAFETY DATA SHEET

SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product (material) Name: Gluatareldehyde 50%. Catalogue # C003.
Other Names:
Recommended Use: A fixitive for electron microscopy

Supplier Name: **ProSciTech**
Postal Address: PO Box 111, Thuringowa Central Qld. 4817 Australia
Street Address: 1/11 Carlton Street, Kirwan, Qld. 4817 Australia
Telephone Number: (07) 4773 9444
Fax Number: (07) 4773 2244
Emergency Contact: (07) 4773 9444 8:30am – 5:00pm, Monday to Friday

SECTION 2 - HAZARDS IDENTIFICATION

Hazard Classification: Hazardous according to criteria of NOHSC.
Risk Phrases:
Safety Phrases:

SECTION 3 - COMPOSITION /INFORMATION ON INGREDIENTS

SUBSTANCE:
Chemical Identity: Glutaraldehyde 50%
Common Name(s):
CAS Number(s): 111-30-8

MIXTURE:

Ingredients	Cas Number(s)	Proportion (%)
Glutaraldehyde	111-30-8	50%
Water	7732-18-5	<=50%
Methanol	67-56-1	<=0.5%

SECTION 4 - FIRST AID MEASURES

Swallowed: Immediately contact a poison control centre or doctor, DO NOT induce vomiting, DO NOT give the victim anything to drink. May be fatal if swallowed. Swallowing may result in irritation or burns to the mouth, throat and gastrointestinal tract. This may result in gastrointestinal irritation or ulceration. Exessive exposure may cause headache, dizziness, anesthesia, drowsiness, unconciousness and other nervous system effects, including death. Apsiration into the lungs may occur during ingestion or vomiting, causing tissue gamage or lung injury.

Eye: Rinse eye for 15 minutes, after 5 minutes remove any contacts. Seek medical attention from an ophthamologist. May cause severe irritation with corneal injury which may result in permanent impairment of vision, even blindness. Chemical burns may occur. Vapour may cause eye irritation experienced as a mild discomfort and redness.

Skin: Remove clothing an wash body with soap and water if an allergic reaction appears seek medical attention. Wash contaminated clothing before reusing, get rid of any leather materials (eg. belt, shoes). Harmful if absorbed through the skin. Skin contact may cause an allergic skin reaction in a small proportion of individuals.

Inhaled: Move person to fresh air, if person is not breathing call an ambulance and give them artificial respiration. If breathing is difficult, oxygen should be administered by qualified personnel. Vapour may cause severe irritation of the upper respiratory tract (nose and throat). Vapour from heated material may cause serious adverse effects, even death. Asthma-like symptoms (may include coughing, difficulty breathing and a feeling of tightness in the chest) may occur in people prone to respiratory disorders or other allergies.

First Aid Facilities: Eye Bath, Safety Shower.

Medical Attention & Special Treatment:

Probable mucosal damage may contraindicate the use of gastric lavage. Due to irritant properties, swallowing may result in burns/ulceration of the mouth, stomach and lower gastrointestinal tract. May cause asthma-like symptoms, bronchodilators, expectorants and antitussives may be of help. Maintain adequate ventilation and oxygenation of the patient. Treat bronchospasm with inhaled beta2 agonist and oral or parenteral corticosteroids. Chemical eye burns may require extended irrigation, obtain prompt consultation from an ophthalmologist. Inhalation of vapours may result in skin sensitisation, in sensitised individuals reexposure to small amounts of vapour, mist or liquid may cause a severe allergic reaction. If burn is present, treat as a thermal burn, after decontamination. Treatment of exposure should be directed at the control of symptoms and the clinical condition of the patient.

ADDITIONAL INFORMATION:

SECTION 5 - FIRE FIGHTING MEASURES

Suitable Extinguishing Media: To extinguish combustible residues of this product use water fog, carbon dioxide, dry chemical or foam.

Hazards from Combustion Products: Under fire conditions some of the components of this product may decompose, the smoke may contain unidentified toxic and/or irritating compounds. Combustion products may include and are not limited to: Carbon monoxide, Carbon dioxide.

Precautions for Fire Fighters: Wear positive pressure self-contained breathing aparatus and protective fire fighting clothing. Avoid contact with the material during fire fighting operations.

Hazchem Code: 2R

SECTION 6 - ACCIDENTAL RELEASE MEASURES

Emergency Procedures: Contain spilled material if possible. Collect in suitable and properly labeled containers.

Containment and clean up: Very low concentrations (5ppm or less of glutaraldehyde) can be degraded in a biological wastewater treatment system, to do this flush the small spill with large quantities of water. Large spills are harmful to the treatment system, thus they have to be decontaminated by carefully applying sodium hydroxide or sodium bisulfite. Depending on the conditions, considerable heat and fumes can be liberated by the decontamination process. Please refer to your local and state laws on waste removal. Use appropriate safety equipment, goggles, gloves (butyl or nitrile), protective clothing, depending upon the situation.

SECTION 7 - HANDLING & STORAGE

Precautions for Safe Handling: Do not get in eyes, on skin, on clothing. Avoid breathing vapour. Do not swallow. Wear goggles, protective clothing, and butyl or nitrile gloves. Wash thoroughly with soap and water after handling. Remove contaminated clothing and wash before reuse.

Conditions for Safe Storage: Keep container closed, in a well ventilated area.

SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

National Exposure Standards: Methanol - ACGIH TWA 200ppm
Methanol - ACGIH STEL 250ppm

Biological Limit Values:

Engineering Controls: Provide a general and/or local exhaust ventilation to control airborne levels below the exposure guidelines.

Personal Protective Equipment: Use chemical goggles, protective clothing resistant to chemicals (face shield, boots, apron, or full body suit depending on the task), rubber gloves (either butyl or nitrile are recommended) and use an NIOSH approved air purifying respirator in a situation were the atmospheric levels are above the exposure guidelines.

SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

Appearance:	Liquid, clear
Odour:	Fruity
pH:	3.1 - 4.5 ASTM D56
Vapour pressure:	0.20 mmHg @ 2°C
Vapour density:	(air =1): 1.1
Boiling point/range:	(760 mmHg): 100.7°C
Freezing/melting point:	-18oC/ not applicable to liquids
Solubility:	(by weight) 100% @ 20°C
Specific gravity or density:	(H2O = 1): 1.129
Flash Point:	(closed cup) none
Flammable (explosive) limits:	No test data available
Ignition temperature:	No test data available
Additional Information:	

SECTION 10 - STABILITY AND REACTIVITY

Chemical stabilty:	Thermally stable at typical use temperatures.
Conditions to avoid:	Elevated temperatures this causes decomposition of the active ingredient.
Incompatible Materials:	Amines, ammonia, strong acids, strong bases, strong oxidizers and metals (eg. aluminium, carbon steel, copper, iron, mild steel.
Hazardous Decomposition Products:	Will not occur.
Hazardous Reactions:	

SECTION 11 – TOXICOLOGICAL INFORMATION

Acute and chronic health effects:	Ingestion - LD50 rat male 1,468 mg/kg Skin - Ld50 rabbit 897 - 1,432 mg/kg Inhalation - LC50 4 h vapour > 27 ppm
Possible routes of exposure:	Skin contact, vapour inhalation, ingestion.
Range of effects following exposure:	Exposure can result in an allergic skin reaction (in non-sensitized individuals). Severe allergic skin reaction can be cause by inhalation or skin contact in sensitized individuals. If ingested headache, dizziness, anesthesia, drowsiness, unconciousness and other nervous system effects, including death. Aspiration into the lungs may occur during ingestion or vomiting, causing tissue gamage or lung injury.
Dose likely to cause injury:	
Delayed effects:	
Relevant negative data:	

SECTION 12 – ECOLOGICAL INFORMATION

Ecotoxicity:	Material is highly toxic to aquatic organisms on an acute basis (LC50/EC50 between 0.1 and 1 mg/L in the most sensitive species tested). Material is moderately toxic to birds on an acute basis (LD50 btween 51 and 500 mg/kg), but on a dietary basis is practically non-toxic to birds (LC50>5000 ppm).
Persistence and degradability:	Material is readily biodegradable.
Mobility:	
Additional Information:	

SECTION 13 - DISPOSAL CONSIDERATIONS

Disposal Methods:	Do not dump into any sewers, on the ground, or into any body of water. all disposal practices must be in compliance all federal, state and local laws and regulations. Waste characterisations and compliance with applicable laws are the responsibility solely of the waste generator.
Special Precautions:	

SECTION 14 - TRANSPORT INFORMATION

UN Number:	UN3265
UN Proper Shipping Name:	Corrosive Liquid, Acidic, Organic, nos
Class and Subsidiary risk:	8
Packing Group:	II
Special Precautions for User:	Keep container closed
Hazchem Code:	2R

SECTION 15 - REGULATORY INFORMATION

Poison Schedule Number:	None allocated

SECTION 16 - OTHER INFORMATION

Date of preparation of MSDS:	30 August 2007