

## MATERIAL SAFETY DATA SHEET

### SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material Name:** Pipes Buffer.  
**Catalogue Number:** C022.  
**Other Names:** 1,4-Piperazinediethanesulfonic acid; Piperazine-1,4-bis(2-ethanesulfonic acid);  
 Piperazine-N,N'-bis(2-ethanesulfonic acid)  
**Recommended Use:** A buffer for electron microscopy.

**Supplier Name:** ProSciTech  
**Street Address:** 1/11 Carlton Street, Kirwan, Qld. 4817 Australia  
**Telephone Number:** (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)  
**Emergency Contact:** (07) 4773 9444 - 8:30am – 5:00pm, Monday to Friday (excluding Public Holidays)

### SECTION 2 - HAZARDS IDENTIFICATION

**Hazard Classification:**  
 Not classified as hazardous according to criteria for Classifying Hazardous Substances [NOHSC:1008].  
**Hazardous and/or Dangerous Nature:**  
 NON-HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.  
**Risk Phrases:**  
 Not available.  
**Safety Phrases:**  
 Not available.

*Refer to Section 15 for Poisons Schedule.*

### SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

**Pure Substance (Proportion 100%):**  
**Chemical Identity:** Pipes Buffer.  
**Common Name(s):** 1,4-Piperazinediethanesulfonic acid; Piperazine-1,4-bis(2-ethanesulfonic acid);  
 Piperazine-N,N'-bis(2-ethanesulfonic acid)  
**CAS Number:** 5625-37-6

### SECTION 4 - FIRST AID MEASURES

**Ingestion:** If conscious wash out the person's mouth with water and seek immediate medical attention. Never give anything to an unconscious person.  
**Inhalation:** Remove person to fresh air, if not breathing give artificial respiration. If breathing is difficult administer oxygen. Seek immediate medical attention.  
**Eye Contact:** Wash skin with soap and water for at least 15 minutes. Seek medical attention. Wash all contaminated clothing before reusing.  
**Skin Contact:** Wash skin with soap and water for at least 15 minutes. Seek medical attention. Wash all contaminated clothing before reusing.  
**First Aid Facilities:** Eyebath/eyewash, Safety shower & general washroom facilities.  
**Medical Attention & Special Treatment:**  
 Treat symptomatically and supportively.  
**Additional Information:**  
 Harmful if inhaled, ingested, or absorbed through eyes or skin. May cause irritation.

### SECTION 5 - FIRE FIGHTING MEASURES

**Suitable Extinguishing Media:**  
 Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.  
**Hazards from Combustion Products:**  
 Produces Carbon oxides, nitrogen oxides (NOx), Sulphur oxides when heated  
**Precautions for Fire Fighters:**  
 Wear self contained breathing apparatus and protective clothing to prevent contact with skin and eyes.  
**Hazchem Code:** Not available.

### SECTION 6 - ACCIDENTAL RELEASE MEASURES

**Emergency Procedures:**  
 Not available.

**Containment & Clean up:**

Wearing protective equipment (refer to Section 8), sweep up the material and place into a sealable container and hold for waste disposal. Avoid raising dust. Ventilate the area and wash spill site after cleanup is complete.

**SECTION 7 - HANDLING & STORAGE****Precautions for Safe Handling:**

Avoid inhalation, contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Wash thoroughly after handling. Only use in a well ventilated area (preferably mechanical ventilation).

**Precautions for Safe Storage:**

Store in cool place. Keep container tightly closed in a dry and well-ventilated place.

**SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION**

**National Exposure Standards:** No exposure standard allocated.

**Biological Limit Values:** No biological limit allocated.

**Engineering Controls:**

Mechanical exhaust required.

**Personal Protective Equipment:**

Respiratory protection: Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection: For prolonged or repeated contact use protective gloves.

Eye protection: Safety glasses.

Hygiene measures: General industrial hygiene practice.

**SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES**

**Appearance:** White powder.

**Odour:** Not available.

**pH:** Not available.

**Vapour pressure (mm of Hg at °C):** Not available.

**Vapour density:** Not available.

**Boiling point/range (°C):** Not available.

**Freezing/melting point (°C):** Melting Point: 300 °C.

**Solubility:** Not available.

**Specific gravity or density:** Not available.

**Flash Point:** Not available.

**Flammable (explosive) limits:** Not available.

**Ignition temperature:** Not available.

**Additional Information:**

**Formula :** C<sub>8</sub>H<sub>18</sub>N<sub>2</sub>O<sub>6</sub>S<sub>2</sub>

**Molecular Weight :** 302.37 g/mol

**SECTION 10 - STABILITY AND REACTIVITY**

**Chemical stability:** Stable under normal conditions of use.

**Conditions to avoid:** Avoid contact with incompatible materials.

**Incompatible Materials:** Strong oxidising agents.

**Hazardous Decomposition Products:**

Produces Carbon oxides, nitrogen oxides (NO<sub>x</sub>), Sulphur oxides when heated.

**Hazardous Reactions:** Will not occur.

**SECTION 11 - TOXICOLOGICAL INFORMATION****Exposure and Health Effects:**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**Ingestion:**

May be harmful if swallowed.

**Inhalation:**

May be harmful if inhaled. May cause respiratory tract irritation.

**Eye Contact:**

May cause eye irritation.

**Skin Contact:**

May be harmful if absorbed through skin. May cause skin irritation.

**Human/Animal data:** No data available.

**Carcinogenic Category:** Not classified as a Carcinogen by the IARC.

**Other Carcinogenic Information:** No data available.

<b>SECTION 12 – ECOLOGICAL INFORMATION</b>
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**Ecotoxicity:** Not available.

**Persistence and degradability:** Not available.

**Mobility:** Not available.

**Additional Information:** Not available.

<b>SECTION 13 - DISPOSAL CONSIDERATIONS</b>
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**Disposal Methods:**

Observe all Federal, state and local regulations for disposal. Dissolve or mix with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.

**Special Precautions/Additional Informational:**

Contaminated packaging: Dispose of as unused product.

<b>SECTION 14 - TRANSPORT INFORMATION</b>
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**UN Number:** Not regulated.

**UN Proper Shipping Name:** Not regulated.

**Class and Subsidiary risk:** Not regulated.

**Packing Group:** Not regulated.

**Special Precautions for User:** Not available.

**Hazchem Code:** Not available.

<b>SECTION 15 - REGULATORY INFORMATION</b>
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**Poison Schedule Number:** None Allocated.

<b>SECTION 16 - OTHER INFORMATION</b>
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**Date of preparation of MSDS:** April 11

**Comments:****List of Publications referenced when creating this MSDS;**

- Hazardous Substances Information System Consolidated Lists: Safe Work Australia.
- APPROVED CRITERIA FOR CLASSIFYING HAZARDOUS SUBSTANCES [NOHSC:1008(2004)] 3rd Edition: National Occupational Health and Safety Commission.
- Dangerous Goods - Initial Emergency Response Guide (SAA/SNZ HB76:1997).
- IATA Dangerous Goods Regulations.
- Adopted National Exposure Standards for Atmospheric Contaminants in the Occupational Environment [NOHSC:1003(1995)].
- Australia Standard for the Uniform Scheduling of Drugs and Poisons [SUSPD] (Australian Government Department of Health and Ageing).

*This Material Safety Data Sheet (MSDS) has been prepared in compliance with the National code of Practice for the Preparation of Material Safety Data Sheets 2<sup>nd</sup> Edition [NOHSC:2011(2003)]. It is the user's responsibility to determine the suitability of this information for adoption of necessary safety precautions. The information published in this MSDS has been compiled from the publications listed in Section 16: to the best of our ability and knowledge these publications are considered accurate. We reserve the right to revise Material Safety Data Sheets as new information becomes available. Copies may be made for non-profit use.*

**... End of MSDS ...**