

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material Name:** Aqueous conductive silver liquid, SEM adhesive  
**Catalogue Number:** I005; I0051.  
**Other Names:** Conductive water-based glue.  
**Recommended Use:** Conductive, water based glue especially for SEM specimens – slow drying.

**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:**  
 Hazardous according to criteria of Hazardous Substances Information System [HSIS Worksafe Australia].

**Hazardous and/or Dangerous Nature:**  
 HAZARDOUS SUBSTANCE. NON-DANGEROUS GOODS.

**Risk Phrases:**  
 R11: Highly flammable.  
 R36/37: Irritating to eyes and respiratory system.

**Safety Phrases:**  
 S16: Keep away from sources of ignition - No smoking.  
 S20/21: When using, do not eat, drink or smoke.  
 S23: Do not breathe fumes.  
 S25: Avoid contact with eyes.  
 S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
 S29: Do not empty into drains.  
 S33: Take precautionary measures against static discharges.  
 S35: This material and its container must be disposed of in a safe way.  
 S36/37/39: Wear suitable protective clothing, gloves and eye/face protection.  
 S45: In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

*Refer to Section 15 for Poisons Schedule.*

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

**Mixture Substance:**

<b>Ingredients</b>	<b>Cas Number(s)</b>	<b>Proportion (%)</b>
Silver Powder	7440-22-4	56
Parfix PVA Adhesive (mixture see below)	(Proportion of mixture below)	44
Polyvinyl acetate	9003-20-7 (30-60%)	
Vinyl Acetate	108-05-4 (<0.1%)	
Water	7732-18-5 (to 100%)	

## SECTION 4 - FIRST AID MEASURES

**Ingestion:** If patient is conscious, drink at least two large glasses of milk or water. DO NOT induce vomiting. Obtain immediate medical attention.

**Inhalation:** Remove victim from area of exposure - avoid becoming a casualty. Seek medical advice if effects persist.

**Eye Contact:** Flush with water, including under lids, for at least 15 minutes. Seek medical attention.

**Skin Contact:** If skin contact occurs, remove contaminated clothing and wash skin with soap and water. If irritation occurs, seek medical advice.

**First Aid Facilities:** Eyebath/eyewash, Safety shower & general washroom facilities.

**Medical Attention & Special Treatment:**

Treat symptomatically and supportively.

## SECTION 5 - FIRE FIGHTING MEASURES

### Suitable Extinguishing Media:

Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

### Hazards from Combustion Products:

Not combustible, however following evaporation of the water component of the material, the residual material can burn if ignited. On burning will emit toxic fumes.

### Precautions for Fire Fighters:

Fire fighters to wear self-contained breathing apparatus and suitable protective clothing if risk of exposure to vapour or products of combustion.

**Hazchem Code:** Not available.

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### Containment & Clean up:

Slippery when spilt. Avoid accidents, clean up immediately. Wear protective equipment to prevent skin and eye contact. Contain - prevent run off into drains and waterways. Use absorbent (soil, sand or other inert material). Collect and seal in properly labelled containers or drums for disposal.

## SECTION 7 - HANDLING & STORAGE

### Precautions for Safe Handling:

Avoid skin and eye contact and breathing in vapour.

### Precautions for Safe Storage:

Store in a cool, dry, well ventilated place and out of direct sunlight. Store away from incompatible materials described in Section 10. Keep containers closed when not in use - check regularly for leaks.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards:** Silver Powder Cas No. 7440-22-4:  
TWA 0.1mg/m<sup>3</sup>

Vinyl Acetate Cas No. 108-05-4:  
TWA 10ppm; TWA 35mg/m<sup>3</sup>; STEL 20ppm; STEL 70mg/m<sup>3</sup>.

### Engineering Controls:

Use in well ventilated areas. If inhalation risk exists: Use with local exhausts ventilation or while wearing organic vapour respirator. Keep containers closed when not in use.

### Personal Protective Equipment:

Wear overalls, safety glasses and impervious gloves. Always wash hands before smoking, eating, drinking or using the toilet. Wash contaminated clothing and other protective equipment before storage or re-use.

If risk of inhalation exists, wear organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

## SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance:</b>	Liquid, Milky with a white lustrous metal sheen.
<b>Odour:</b>	Mild.
<b>pH:</b>	Not available.
<b>Vapour pressure (mm of Hg at °C):</b>	3kPa (20°C).
<b>Vapour density:</b>	V Av.
<b>Boiling point/range (°C):</b>	100 °C (water)
<b>Freezing/melting point (°C):</b>	Not applicable.
<b>Solubility:</b>	100% soluble.
<b>Specific gravity or density:</b>	1.08 at 20°C.
<b>Flash Point:</b>	Not available.
<b>Flammable (explosive) limits:</b>	Not available.
<b>Ignition temperature:</b>	Not available.

**SECTION 10 - STABILITY AND REACTIVITY**

<b>Chemical stability:</b>	Stable under normal conditions of use.
<b>Conditions to avoid:</b>	Avoid exposure to frost. Avoid exposure to heat, sources of ignition, and open flame. Avoid contact with incompatible materials.
<b>Incompatible Materials:</b>	Strong acids, bases and oxidizing agents, ammonia, acetylene and hydrogen peroxide.
<b>Hazardous Decomposition Products:</b>	Oxides of carbon are produced when in a fire situation.
<b>Hazardous Reactions:</b>	None known.

**SECTION 11 - TOXICOLOGICAL INFORMATION**

<b>Exposure and Health Effects:</b>	No adverse health effects expected if product is handled with care.
<b>Ingestion:</b>	Non-specific symptoms may occur due to presence of particulate matter; however, large amounts may cause nausea and vomiting.
<b>Inhalation:</b>	Causes mild, non-specific irritation of nasal passages
<b>Eye Contact:</b>	Particles of silver metal are extremely irritating to eyes.
<b>Skin Contact:</b>	No effect reported; contact with skin may result in irritation.
<b>Human/Animal data:</b>	330 mg/kg (rat, multiple methods of administration) – Silver Powder.
<b>Carcinogenic Category:</b>	Not classified as a Carcinogen by the IARC.

**SECTION 12 – ECOLOGICAL INFORMATION**

<b>Ecotoxicity:</b>	This material should be considered as harmful to aquatic life; avoid contaminating waterways.
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**SECTION 13 - DISPOSAL CONSIDERATIONS**

**Disposal Methods:** Refer to Waste Management Authority. Dispose of material through a licensed waste contractor or dispose of in accordance with all federal, state and local regulations and laws.

**Special Precautions/Additional Informational:** Do not allow entry into drains/waterways.

**SECTION 14 - TRANSPORT INFORMATION**

<b>UN Number:</b>	Not regulated.
<b>UN Proper Shipping Name:</b>	Not regulated.
<b>Class and Subsidiary risk:</b>	Not regulated.
<b>Packing Group:</b>	Not regulated.
<b>Special Precautions for User:</b>	Not available.
<b>Hazchem Code:</b>	Not available.

**SECTION 15 - REGULATORY INFORMATION**

**Poison Schedule Number:** None Allocated.

**SECTION 16 - OTHER INFORMATION**

**Date of preparation of MSDS:** 15 February 2012

**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 ...*