

# MATERIAL SAFETY DATA SHEET

## SECTION 1 - IDENTIFICATION OF THE MATERIAL AND SUPPLIER

**Material Name:** Cytoseal™ 60 mounting medium, Cytoseal™ 280 mounting medium.  
**Catalogue Number:** IA013, IA014.  
**Other Names:** Accumount 60 Mounting Medium, Accumount 280 Mounting Medium, Acrylic Resin with Toluene, Aromatic Hydrocarbon.  
**Recommended Use:** Used as a mounting medium to mount specimens for 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:** Hazardous according to criteria of Hazardous Substances Information System [HSIS Worksafe Australia].  
**Hazardous and/or Dangerous Nature:** HAZARDOUS SUBSTANCE. DANGEROUS GOODS.  
**Risk Phrases:** R38 Irritating to skin.  
R48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.  
R50/53 Very toxic to aquatic organisms, may cause long-term effects in the aquatic environment.  
R61 May cause harm to the unborn child.  
R62 Possible risk of impaired fertility.  
R63 Possible risk of harm to the unborn child.  
R65 Harmful: May cause lung damage if swallowed.  
R67 Vapours may cause drowsiness and dizziness.  
**Safety Phrases:** S2 Keep out of reach of children.  
S36/37 Wear suitable protective clothing and gloves.  
S45 In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).  
S53 Avoid exposure-obtain special instructions before use.  
S60 This material and its container must be disposed of as hazardous waste.  
S61 Avoid release to the environment. Refer to special instructions/Material Safety Data Sheets.  
S62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

*Refer to Section 15 for Poisons Schedule.*

## SECTION 3 - COMPOSITION / INFORMATION ON INGREDIENTS

### *Pure Substance (Proportion 100%):*

**Chemical Identity:** Aromatic Hydrocarbon.  
**Common Name(s):** Accumount 60 Mounting Medium, Accumount 280 Mounting Medium, Acrylic Resin with Toluene, Aromatic Hydrocarbon, Cytoseal™ 60 mounting medium, Cytoseal™ 280 mounting medium.  
**CAS Number:** Mixture – see below.

### *Mixture Substance:*

Ingredients	Cas Number(s)	Proportion (%)
Toluene	108-88-3	~65
Acrylic Resin	28262-63-7	~35
2,6-Di-tert-butyl-p-cresol (antioxidant)	128-37-0	~0.1-1
Butyl Butyl Phthalate (BBP)	85-68-7	~0.1-1

Cytoseal™ 60 is a mixture of acrylic resin suspended in toluene. The toluene content is approximately 65%.

## SECTION 4 - FIRST AID MEASURES

<b>Ingestion:</b>	If swallowed. Do not induce vomiting. If vomiting does occur, insure victims head is lower than hips in order to prevent aspiration. Call a physician immediately.
<b>Inhalation:</b>	Remove from exposure area to fresh air immediately. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Keep affected person warm and at rest. Get medical attention immediately.
<b>Eye Contact:</b>	Wash eyes immediately with large amounts of water, lifting upper and lower lids, for at least 15-20 minutes. Get medical attention.
<b>Skin Contact:</b>	Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent with large amounts of water for at least 15-20 minutes. Get medical attention if irritation persists.
<b>First Aid Facilities:</b>	Eyebath/eyewash.
<b>Medical Attention &amp; Special Treatment:</b>	No specific antidote. Treat symptomatically and supportively.

Acute effects due to inhalation or ingestion range from headache, nausea, vomiting, tightness of the chest and staggering to visual blurring, tremors, shallow and rapid respiration and ventricular irregularities. Kidney or liver damage may occur.

### **Additional Information:**

Cytoseal™ 60 is a mixture of acrylic resin suspended in toluene. The toluene content is approximately 65%. Cytoseal is a colourless, viscous solution with a characteristic aromatic odor. Cytoseal can be toxic if swallowed. Systemic effects by inhalation are most commonly seen. Symptoms from mild exposure may include dizziness, weakness, euphoria, headache, nausea and vomiting. Repeated or prolonged exposure increases the toxic effects.

## SECTION 5 - FIRE FIGHTING MEASURES

### **Suitable Extinguishing Media:**

Small fire: Dry chemical, carbon dioxide, water spray or regular foam.

Large fire: Water spray, fog or regular foam.

### **Hazards from Combustion Products:**

Vapours form explosive mixtures with air. Vapours may travel a considerable distance to a source of ignition and flash back. Not soluble with water.

### **Precautions for Fire Fighters:**

Provide respiratory protection by wearing a self-contained breathing apparatus. Wear appropriate protective equipment for surrounding fire. Use water spray to reduce vapours and keep fire-exposed containers cool.

**Hazchem Code:** 3WE

## SECTION 6 - ACCIDENTAL RELEASE MEASURES

### **Emergency Procedures:**

Evacuate area of unnecessary personnel, remove sources of ignition and ventilate the area.

### **Containment & Clean up:**

**SMALL SPILL:** Remove all ignition sources. Wear protective equipment, appropriate gloves, safety glasses and apron. Absorb liquids in vermiculite, dry sand or similar material and deposit in sealed container.

**LARGE SPILL:** Wear an approved respirator. Follow the above procedure.

## SECTION 7 - HANDLING & STORAGE

### **Precautions for Safe Handling:**

Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapour. Use only with adequate ventilation. Wash thoroughly after handling.

### **Precautions for Safe Storage:**

Store in a cool, dry place away from heat sparks and open flames. Keep container tightly closed and in an upright position to prevent leakage. Do not store next to oxidizing materials. Empty containers retain product residue – dispose of according to Section 13.

## SECTION 8 - EXPOSURE CONTROLS/PERSONAL PROTECTION

**National Exposure Standards:** Toluene, Cas 108-88-3;  
TWA 50ppm (191mg/m3)  
STEL 150ppm (574mg/m3)

Acrylic Resin, Cas 28262-63-7: no exposure standard allocated.

2,6-Di-tert-butyl-p-cresol, Cas 128-37-0:  
TWA 10mg/m<sup>3</sup>

Butyl Butyl Phthalate, Cas 85-68-7: no exposure standard allocated.

According to the Hazardous Substances Information System (Safe Work Australia)

**Biological Limit Values:**

Toluene, Cas 108-88-3:  
ACGIH TLVs TWA 50ppm (188mg/m<sup>3</sup>)  
OSHA PELs TWA 100ppm (375mg/m<sup>3</sup>)  
OSHA PELs STEL/CEIL 150ppm (560mg/m<sup>3</sup>)  
NIOSH RELs TWA 100ppm (375mg/m<sup>3</sup>)  
NIOSH RELs STEL/CEIL 150ppm (560mg/m<sup>3</sup>)  
DFG MAKs TWA 50ppm (190mg/m<sup>3</sup>)

**Engineering Controls:**

Provide local exhaust or process enclosure ventilation. Provide an eye wash fountain and quick drench shower within the immediate work area for emergency use.

**Personal Protective Equipment:**

RESPIRATOR: In the event of a very large spill, an appropriate respirator should be worn for clean up procedures.

FIRE FIGHTING AND OTHER IMMEDIATELY DANGEROUS SITUATIONS: Any self-contained breathing apparatus that has a full face piece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator that has a full face piece and is operated in a pressure-demand or other positive-pressure mode in combination with an auxiliary self-contained breathing apparatus operated in pressure-demand or other positive-NEED pressure mode.

CLOTHING: Employees should wear protective outer garment when spill or splattering is likely.

GLOVES: Wear resistant gloves for prolonged or repeated contact.

EYE PROTECTION: Employee must wear splash-proof or dust-resistant safety goggles to prevent contact with this substance.

## SECTION 9 - PHYSICAL & CHEMICAL PROPERTIES

<b>Appearance:</b>	Colourless liquid.
<b>Odour:</b>	Characteristic aromatic odour.
<b>pH:</b>	(H <sub>2</sub> O=1 @25°C): 0.97 Kg/l
<b>Vapour pressure (mm of Hg at °C):</b>	Approximately 47 mm/Hg @ 20°C.
<b>Vapour density:</b>	Heavier than air.
<b>Boiling point/range (°C):</b>	110°C.
<b>Freezing/melting point (°C):</b>	Not available.
<b>Solubility:</b>	Insoluble in water.
<b>Specific gravity or density:</b>	(H <sub>2</sub> O=1 @25°C): 0.97 Kg/l
<b>Flash Point:</b>	4.5°C.
<b>Flammable (explosive) limits:</b>	Upper Explosive Limit: For Toluene 7.1% Lower Explosive Limit: For Toluene 1.2%
<b>Ignition temperature:</b>	Not available.
<b>Additional Information:</b>	
<b>Evaporation rate(Butyl Acetate=1):</b>	Slower than ether.

## SECTION 10 - STABILITY AND REACTIVITY

<b>Chemical stability:</b>	Stable under normal conditions of use. Stable in closed containers under normal temperatures and pressures: Toluene may evaporate on exposure to air.
<b>Conditions to avoid:</b>	Long periods of exposure to air, sources of ignition and incompatible materials.
<b>Incompatible Materials:</b>	Strong Acids, Oxidizing materials. TOLUENE: Allyl + Dichloroethyl Aluminum Or Ethylaluminum Sesquichloride: Possible explosion. Bromine Trifluoride(Solid): Violent reaction 1,3-Dichloro-5.5-Dimethyl-2,4-Imidazolididione: Explosive reaction. Dinitrogen Tetrafluoride: Forms explosive mixture. Nitric Acid: Vigorous reaction. Nitric Acid + Sulfuric Acid: Violent decomposition possible. Nitrogen Tetroxide: Explosive reaction.

Oxidizers (Strong): Fire and explosion hazard.  
 Plastics, Rubber, And Coatings: May be attacked.  
 Silver Perchlorate: Forms shock-sensitive mixture.  
 Sulfur Dichloride: Violent reaction, greatly accelerated in the presence of iron or ferric chloride.  
 Sulfuric Acid: Exothermic reaction.  
 Tetranitromethane: Forms explosive mixture.  
 Uranium Hexafluoride: Violent reaction.

**Hazardous Decomposition Products:**

Thermal decomposition products may create acrid smoke and irritating fumes.

**Hazardous Reactions:** Hazardous polymerization will not occur.

<b>SECTION 11 - TOXICOLOGICAL INFORMATION</b>
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**Exposure and Health Effects:**

Acute: effects due to inhalation or ingestion range from headache, nausea, vomiting, tightness of the chest and staggering to visual blurring, tremors, shallow and rapid respiration and ventricular irregularities. Kidney or liver damage may occur.

Delayed: Repeated or prolonged exposure to toluene may cause headache, loss of appetite, drowsiness, nervousness, and pallor. Continue repeated inhalation of toluene to the point of euphoria has caused irreversible encephalopathy with ataxis, tremulousness, emotional lability, and diffuse cerebral atrophy.

**Ingestion:**

Harmful, may be fatal if swallowed. May cause nausea or vomiting.

**Inhalation:**

May cause dizziness, headache, nausea or vomiting.

**Eye Contact:**

May cause irritation and damage to eyes.

**Skin Contact:**

May cause skin irritation.

**Human/Animal data:**

TOLUENE

**IRRITATION DATA:**

300 ppm eye-human; 870 ug eye-rabbit mild; 2 mg/24 hours eye-rabbit severe; 100 mg/30 seconds rinsed.  
 eye-rabbit mild; 435 mg skin-rabbit mild; 500mg skin-rabbit moderate; 20 mg/24 hours skin-rabbit moderate.

**TOXICITY DATA:**

200 ppm inhalation-human TCLO: 100 ppm inhalation-man TCLO; 26,700; 26,700 ppm/1 hour inhalation-rat LC50; 400 ppm/24 hours inhalation mouse LC50; 55,000 ppm/40 minutes inhalation-rabbit LCLO; 1600 ppm inhalation-guinea pig LCLO; 12,124 mg/kg skin-rabbit LD50; 50mg/Kg oral-human LDLO; 636 mg/kg oral-rat LD50; 2250 mg/kg subcutaneous mouse LD50; 1960 mg/kg Intravenous-rat LD50; 130 mg/kg intravenous-rabbit ldlo; 500 mg/kg intraperitoneal-guinea pig LD50; 1332 mg/kg intraperitoneal-rat LD50; 59 mg/kg intraperitoneal-mouse LD50; 1750 mg/kg intraperitoneal-mammal LDLO; 6900 mg/kg unreported-rat LD50; 2000 mg/kg unreported-mouse LD50; mutagenic data (RTECS); reproductive effects data (RTECS).

**Carcinogenic Category:**

No data available to classify Carcinogenic Category.

**Other Carcinogenic**

No further data available.

**Information:**

<b>SECTION 12 – ECOLOGICAL INFORMATION</b>
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**Ecotoxicity:**

Acute toxic effects may include the death of animals, birds, or fish, and death or low growth rate in plants. Acute effects are seen two to four days after animals or plants come in contact with a toxic chemical substance. Toluene has moderate acute toxicity to aquatic life. Toluene has caused leaf membrane damage in plants. Chronic toxic effects may include shortened lifespan, reproductive problems, lower fertility, and changes in appearance or behaviour. Chronic effects can be seen long after exposure(s) to a toxic chemical. Toluene has moderate chronic toxicity to aquatic life.

**Persistence and degradability:**

Not available.

**Mobility:**

Not available.

**Additional Information:** Not available.

### SECTION 13 - DISPOSAL CONSIDERATIONS

**Disposal Methods:**

Dispose mounting media as toluene; follow local, state and federal regulations.

**Special Precautions/Additional Informational:**

Hazardous to the environment, do not dispose of down drains or release into river ways.

### SECTION 14 - TRANSPORT INFORMATION

**UN Number:** UN1294  
**UN Proper Shipping Name:** Toluene  
**Class and Subsidiary risk:** 3/6.1  
**Packing Group:** III  
**Special Precautions for User:** Not available.  
**Hazchem Code:** 3WE

### SECTION 15 - REGULATORY INFORMATION

**Poison Schedule Number:** S6  
Toluene is classed as an S6.  
2,6-Di-tert-butyl-p-cresol is considered not to require control by scheduling by the SUSPD.  
Acrylic Resin and Butyl Butyl Phthalate are not listed in the SUSPD.

### SECTION 16 - OTHER INFORMATION

**Date of preparation of MSDS:** October 10

**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 ...**