MATERIAL SAFETY DATA SHEET

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FOR PRODUCT AND SALES INFORMATION

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PRODUCT IDENTIFICATION

PRODUCT NAME: Cytoseal Mounting Medium

SYNONYMS: Accumount 60 Mounting Medium

CHEMICAL FAMILY: Aromatic Hydrocarbon

COMPOSITION AND INGREDIENTS INFORMATION

Toluene	CAS# 108-88-3	-65%
Acrylic Resin	CAS# 28262-63-7	-35%
Antioxidant	CAS# 128-37-0	
Butyl Benzyl Phthalate	CAS# 85-68-7	

HAZARDS IDENTIFICATION

NPFA RATINGS (SCALE 0-4): HEALTH=2 FIRE =3 REACTIVITY=0

DANGER, FLAMMABLE: HARMFUL, IRRITANT

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

PRIMARY ROUTES OF EXPOSURE: Inhalation, ingestion, skin and eye contact.

ACUTE 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.

CHRONIC EFFECTS:

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, tremulosness, emotional lability, and diffuse cerebral atrophy.

POTENTIAL HEALTH EFFECTS:

INHALATION: May cause dizziness, headache, nausea or vomiting.

EYE CONTACT: May cause irritation and damage to eyes.

SKIN CONTACT: May cause skin irritation.

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

FIRST-AID PROCEDURES

INHALATION: 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.

EYE CONTACT:

Wash eyes immediately with large amounts of water, occasionally lifting upper and lower lids, until no evidence of chemical remains (at least 15-20 minutes). Get medical attention.

SKIN CONTACT: Remove contaminated clothing and shoes immediately. Wash affected area with soap or mild detergent and large amounts of water until no evidence of chemical remains (at least 15-20 minutes). Get medical attention if irritation persists.

INGESTION: 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.

ANTIDOTE: No specific antidote. Treat symptomatically and supportively.

FIREFIGHTING PROCEDURES

FIRE AND EXPLOSION HAZARD: Flammable Liquid

FLASH POINT: 40oF (4.5oC) **UPPER EXPLOSIVE LIMIT:** For Toluene 7.1%
LOWER EXPLOSIVE LIMIT: For Toluene 1.2%

FIRE FIGHTING MEDIA:
Dry chemical, carbon dioxide, water spray or regular foam (1993 Dot P 5800.5). For larger fires, use water spray, fog or regular foam (1993 Emergency Response Guidebook, Dot P 5800.5).

FIRE RESPONSE PROCEDURES:
Provide respiratory protection by wearing a self-contained breathing apparatus. Use water spray to reduce vapors and keep fire-exposed containers cool.

UNUSUAL FIRE AND EXPLOSION HAZARDS:
Vapors form explosive mixtures with air. Vapor may travel a considerable distance to a source of ignition and flash back. Not soluble with water.

ACCIDENTAL RELEASE PROCEDURES

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.

HANDLING AND STORAGE

GENERAL HANDLING: FLAMMABLE
Store in a cool, dry place away from heat sparks and open flames.

Do not get in eyes. Avoid contact with skin and clothing. Avoid breathing vapor. Keep container tightly closed and in an upright position to prevent leakage. Use only with adequate ventilation. Wash thoroughly after handling. Do not store next to oxidizing materials. Empty containers retain product residue.

EXPOSURE CONTROL-PERSONAL PROTECTIVE EQUIPMENT

VENTILATION: Provide local exhaust or process enclosure ventilation.

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

FOR FIRE FIGHTING AND OTHER IMMEDIATELY DANGEROUS TO LIFE AND HEALTH CONDITIONS:

Any self-contained breathing apparatus that has a full facepiece and is operated in a pressure-demand or other positive-pressure mode.

Any supplied-air respirator that has a full facepiece 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.

EMERGENCY WASH FACILITIES:

Where there is any possibility that an employee's eyes and/or skin may be exposed to this substance, the employer should provide an eye wash fountain and quick drench shower within the immediate work area for emergency use. Protective eye equipment should meet the requirements for protective clothing and equipment in 29 CFR 1910.1048(H).

EXPOSURE GUIDELINES

Toluene:	ACGIH TLVs	TWA	50ppm (188mg/m3)
	OSHA PELs	TWA	100ppm (375mg/m3)
	OSHA PELs	STEL/CEIL	150ppm (560mg/m3)
	NIOSH RELs	TWA	100ppm (375mg/m3)
	NIOSH RELs	STEL/CEIL	150ppm (560mg/m3)
	DFG MAKs	TWA	50ppm (190mg/m3)

PHYSICAL AND CHEMICAL PROPERTIES

DESCRIPTION: Colorless liquid with a characteristic aromatic odor.

SPECIFIC GRAVITY: (H2O=1@25oC): 0.97 Kg/l
BOILING POINT: 231oF (110oC)
VAPOR PRESSURE: Approximately 47 mm/Hg @ 68oF
SOLUBILITY IN WATER: Insoluble
VAPOR DENSITY: Heavier than air
EVAPORATION RATE(Butyl Acetate=1): Slower than ether
FLASH POINT: 40oF (4.5oC)

STABILITY AND REACTIVITY INFORMATION

REACTIVITY: Cytoseal Mounting Media is stable in closed containers under normal temperatures and pressues: Toluene may evaporate on exposure to air.

INCOMPATIBILITIES: 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 TETROFLUORIDE: 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.
DECOMPOSITION: Thermal decomposition products may create acrid smoke and irritating fumes.
POLYMERIZATION: Hazardous polymerization will not occur.

TOXICOLOGICAL INFORMATION

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).

ECOLOGICAL INFORMATION

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 behavior. Chronic effects can be seen long after exposure(s) to a toxic chemical. Toluene has moderate chronic toxicity to aquatic life. (AQUIRE database, ERL-Duluth, U.S. EPA., phytotox).

DISPOSAL GUIDELINES

Dispose mounting media as toluene-an EPA hazardous waste. Hazardous waste numbers: U220 (toxic), D001(ignitable). Follow local, State and Federal regulations.

TRANSPORT INFORMATION

Proper Shipping Name: TOLUENE SOLUTIONS
Hazard Class or Division: 3
Identification Numbers: UN1294
Packing Group: II
Label(s) Required (if not excepted): None
Exception 1 liter or less (LTD.QTY)
Special Provisions:
Packaging authorizations: Exceptions: 173.150
Non-bulk packaging: 173.202
Quantity Limitations: Passenger aircraft or railcar: 5L

Cargo aircraft only: 60L

REGULATORY INFORMATION

SARA TITLE III (Superfund Amendment and Reauthorization Act)

SECTION 302 and 304: Extremely Hazardous Substance List (40 CFR 355- Not Listed
SECTION 311: Hazard Categorization (40 CFR 370)- Acute, Chronic, and Fire
SECTION 313: Toxic Chemicals Listing (40 CFR 372.65)- Listed as a toxic chemical
CERCLA (Comprehensive Environmental Responses, Compensation, and Liability Act)

SECTION 102(A) Hazardous Substances (40 CFR 302.4)- Listed Reportable Quantity - 1,000 pounds.
SECTION 101(14) Reportable Quantity: 1,000 lbs

RCRA (Resource Conservation and Recovery Act)
40 CFR 261.33 Hazardous Waste Number. U220

NJ-RTK (New Jersey-STATE RIGHT TO KNOW)

Environmental Hazardous Substance List: Listed, Substance # 1866

TSCA (Toxic Substance Control Act) Toluene is listed on the TSCA Inventory