## SECTION 1: PRODUCT AND COMPANY IDENTIFICATION

**PRODUCT NAME:** Mounting Medium, Toluene
**SYNONYMS:** None
**PRODUCT CODES:** ES725, ES726

**MANUFACTURER:** Azer Scientific, Inc.
**ADDRESS:** 701 Hemlock Rd, Morgantown, PA 19543

**CHEMTREC PHONE:** 800-424-9300
**SUPPORT:** 610-524-5810
**FAX:** 610-901-3046

**PRODUCT USE:** Laboratory reagent
**PREPARED BY:** CB

**SECTION 1 NOTES:**

## SECTION 2: HAZARDS IDENTIFICATION

**GHS CLASSIFICATION:** Flammable liquid Category 2; Serious eye damage/irritation Category 2A; Skin corrosion, Irritation Category 2; Acute toxicity, Oral Category 4; Acute toxicity, Inhalation Category 4; Specific Target Organ Toxicity –repeated exposure Category 2

**Signal Word:** Danger!

| **Hazard Phrases** | |
|---|---|
| H225 | Highly flammable liquid and vapor. |
| H302 | Harmful if swallowed. |
| H332 | Harmful if inhaled. |
| H315 | Causes skin irritation. |
| H319 | Causes serious eye irritation. |
| H373 | May cause damage to organs through prolonged of repeated exposure. |

| **Precautionary Phrases** | |
|---|---|
| P210 | Keep away from heat/sparks/open flames/hot surfaces. - No smoking. |
| P260 | Do not breathe dust/ fume/ gas/ mist/ vapors/ spray. |
| P280 | Wear protective gloves/ protective clothing/ eye protection/ face protection. |
| P264 | Wash hands thoroughly after handling. |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P362+P364 | Take off contaminated clothing and wash it before reuse. |
| P304+P340 | IF INHALED: Remove person to fresh air and keep comfortable for breathing. |
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician. |
| P305+P351+P338 | IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P307+P311 | IF exposed: Call a POISON CENTER or doctor/ physician. |
| P370+P378 | In case of fire: Use CO2, dry chemical or foam for extinction. |

**SECTION 2 NOTES:**

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

| INGREDIENT: | CAS NO. | % WT |
|---|---|---|
| Toluene | 108-88-3 | 44% |
| Resin | 68240-06-5 | 57% |

**SECTION 3 NOTES:**

## SECTION 4: FIRST AID MEASURES

**EYES:** Check for and remove any contact lenses. Immediately flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical attention immediately.

**SKIN:** In case of contact, flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention immediately.

**INGESTION:** Call medical doctor or poison control center immediately. Wash out mouth with water. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, have person lean forward to avoid aspiration. Never give anything by mouth to an unconscious person. Get medical attention immediately.

**INHALATION:** Move exposed person to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Loosen tight clothing such as a collar, tie, belt or waistband. Get medical attention immediately

**SECTION 4 NOTES:**

## SECTION 5: FIRE-FIGHTING MEASURES

**FLAMMABILITY OF THE PRODUCT:** OSHA/NFPA Class IC Flammable Liquid
**FLASH POINT:** 40°F Open cup
**AUTOIGNITION TEMPERATURE:** Not Available
**UPPER / LOWER FLAMMABILITY LIMITS:** Lower Limit – 1.7 vol %, Upper Limit – 7.1 vol %
**NFPA HAZARD CLASSIFICATION**
**HEALTH:2 FLAMMABILITY: 3 REACTIVITY: 0**
**OTHER:**

**HMIS HAZARD CLASSIFICATION**
**HEALTH:2 FLAMMABILITY: 3 REACTIVITY: 0**
**PROTECTION:**

**EXTINGUISHING MEDIA:** Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide
**NOT SUITABLE:** Do not use water jet.
**SPECIAL FIRE FIGHTING PROCEDURES:** Flammable liquid. In a fire or if heated, a pressure increase will occur and the container may burst with the risk of a subsequent explosion. Run-off to sewer may create fire or explosion hazard.
**HAZARDOUS DECOMPOSITION PRODUCTS:** Oxides of carbon, Ketones
**SPECIAL PROTECTIVE EQUIPMENT FOR FIRE FIGHTERS:** Wear protective clothing with NIOSH approved breathing apparatus. Products of combustion may be harmful in a fire situation. Burns with invisible flame.

**SECTION 5 NOTES:** Caution: Static accumulator.

## SECTION 6: ACCIDENTAL RELEASE MEASURES

**ACCIDENTAL RELEASE MEASURES:**

**Small spill and leak:** Shut off all ignition sources. Put on appropriate personal protective equipment (see Section 8). Dilute with water and mop up if water-soluble or absorb with an inert dry material and place in an appropriate waste disposal container.

**Large spill and leak:** Stop leak if without risk. Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations (see section 13). Use spark-proof tools and explosion-proof equipment. Dispose of via a licensed waste disposal contractor. Contaminated absorbent material may pose the same hazard as the spilled product.

**SECTION 6 NOTES:**

## SECTION 7: HANDLING AND STORAGE

**HANDLING:** Do not get in eyes, on skin or clothing. Do not breathe vapor or mist. Do not ingest. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Do not enter storage areas and confined spaces unless adequately ventilated. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Store and use away from heat, sparks, open flame or any other ignition source.

**STORAGE:** Store in accordance with local regulations. Store in a segregated and approved area. Store in original container, protected from direct sunlight. Eliminate all ignition sources. Separate from oxidizing materials and strong acids. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage.

**SECTION 7 NOTES:**

## SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION

**ENGINEERING CONTROLS:** General mechanical ventilation or laboratory fume hood. Ensure that eyewash stations and quick drench showers are close to the workstation.

**RESPIRATORY PROTECTION:** Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

**EYE PROTECTION:** Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists or dusts. Recommended: splash goggles

**SKIN PROTECTION:** Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product. Recommended: lab coat

**HANDS:** Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Recommended: Neoprene

**ENVIRONMENTAL EXPOSURE CONTROLS:** Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

**WORK HYGIENIC PRACTICES:** Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing.

**EXPOSURE GUIDELINES:**

**OSHA Permissible Exposure Limits (PELs):**

| Reagent | CAS# | OSHA PEL TWA | Note |
|---|---|---|---|
| Toluene | 108-88-3 | 200 ppm 8 hour(s) | Absorbed through skin |

**ACGIH Threshold Limit values (TLVs):**

| Reagent | CAS# | ACGIH PEL TWA | Note |
|---|---|---|---|
| Toluene | 108-88-3 | 20 ppm (75 mg/m$^3$) | Absorbed through skin |

**SECTION 8 NOTES:**

## SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

**APPEARANCE:** Clear, light amber color
**ODOR:** Characteristic hydrocarbon
**ODOR THRESHOLD:** 0.16 ppm
**PHYSICAL STATE:** liquid
**pH AS SUPPLIED:** Not available
**BOILING POINT:** 110°C (233°F)
**MELTING POINT /FREEZING POINT:** -95°C (-139°F)
**VAPOR PRESSURE (mmHg):** 28.4 mm Hg Toluene
**VAPOR DENSITY (AIR = 1):** 3.1 [Air=1]
**EVAPORATION RATE:** Not available
**SOLUBILITY IN WATER:** Insoluble
**MOLECULAR WEIGHT:** Mixture
**VISCOSITY:** Not available
**SECTION 9 NOTES:**

## SECTION 10: STABILITY AND REACTIVITY

**STABILITY:** Product is stable under normal conditions of use.
**CONDITIONS TO AVOID (STABILITY):** Avoid heat, sparks, flames, and all other sources of ignition. Direct sunlight.
**INCOMPATIBILITY (MATERIAL TO AVOID):** Strong oxidizers, chromic anhydride, organic acids
**HAZARDOUS DECOMPOSITION OR BY-PRODUCTS:** Thermal breakdown of this product during fire or very high heat conditions may evolve the following decomposition products: oxides of carbon.

**HAZARDOUS POLYMERIZATION:** No hazardous polymerization
**CONDITIONS TO AVOID (POLYMERIZATION):** N/A

**SECTION 10 NOTES:**

## SECTION 11: TOXICOLOGICAL INFORMATION

**ACUTE TOXICITY:**

Oral LD50: Rat: 2,600-7,500 ppm
Inhalation LC50: Rat: 8000 ppm, 4 hours
Dermal LD50: Rabbit: 12 hours, 124 mg/kg
Other information on acute toxicity: No data available
Skin irritation: Rabbit mild; 500 mg; Rabbit moderate; 20 mg/24hours
Eye irritation: Human; 300 ppm Rabbit mild; 435 mg

Respiratory or skin sensitization: No data available
Respiratory or skin sensitization: No data available
Germ cell mutagenicity: No data available
Carcinogenicity:
IARC: (Toluene): Group 3: Not classifiable as to its carcinogenicity to humans
ACGIH: No components are listed
OSHA: No components are listed

**POTENTIAL HEALTH EFFECTS:**
Eyes: Causes eye irritation.
Ingestion: May cause irritation of the digestive tract. May cause central nervous system depression characterized by excitement followed by nausea, headache, and unconsciousness.
Inhalation: Prolonged exposures may result in dizziness and general weakness. Irritation may lead to pneumonitis and pulmonary edema.
Skin: May be harmful if absorbed through the skin. Causes skin irritation, defatting, cracking, and dryness

**CHRONIC HEALTH HAZARDS:** May cause liver, heart and kidney damage. Repeated or prolonged exposure to toluene may cause headache, loss of appetite, drowsiness, nervousness and pallor. Continued repeated inhalation of toluene to the point of euphoria has caused irreversible encephalopathy with ataxis, tremulousness, emotional lability, and diffuse cerebral atrophy.

**ROUTES OF ENTRY:** Skin/eye contact, inhalation, and ingestion.
**TARGET ORGANS:** Nervous/Blood system, kidney, liver, heart, optic nerve
**SIGNS AND SYMPTOMS OF EXPOSURE:** Vision blurring, drowsiness, and headache
**SECTION 11 NOTES:**

## SECTION 12: ECOLOGICAL INFORMATION

**TOXICITY:**
Ecotoxicity (aquatic and terrestrial, where available):

| Species | Period | Result |
|---|---|---|
| Daphia Magna (EC50) | 48 hour/hours | >10000 mg/l |
| Oncorhynchus myKiss (EC50) | 48 hour/hours | 13200 mg/l |
| Lepomis Macrochirus (EC50) | 48 hour/hours | 16000 mg |
| Daphia Magna (LC50) | 96 hour/hours | >100 mg/l |
| Pimephales Promelas (LC 50) | 96 hour/hours | >100 mg/l |
| Lepomis Macrochirus (LC50) | 96 hour/hours | 15400 mg/l |

**PERSISTANCE AND DEGRADABILITY:** From soil, substance evaporates and is microbially biodegraded. In water, substance volatilizes and biodegrades.
**BIOACCUMULATIVE POTENTIAL:** Bioaccumulation is unlikely.
**MOBILITY IN SOIL:** No data available
**PBT and vPvB ASSESSMENT:** Not required.

**SECTION 12 NOTES:**

## SECTION 13: DISPOSAL CONSIDERATIONS

**WASTE DISPOSAL METHOD:** Unused product: dispose as a regulated hazardous waste. Spent product or spill clean up-follow all provincial, local, state, and federal regulations.

**RCRA HAZARD CLASS:** Toluene CAS#108-88-3: U220

**SECTION 13 NOTES:**

## SECTION 14: TRANSPORT INFORMATION

**U.S. DEPARTMENT OF TRANSPORTATION**

| | |
|---|---|
| **UN No.** | UN1294 |
| **Proper Shipping Name** | Toluene |
| **Hazard Class** | 3 |
| **Packing Group** | II |

**TDG**

| | |
|---|---|
| **UN No.** | UN1294 |
| **Proper Shipping Name** | Toluene |
| **Hazard Class** | 3 |
| **Packing Group** | II |

**IATA**

| | |
|---|---|
| **UN No.** | UN1294 |
| **Proper Shipping Name** | Toluene |
| **Hazard Class** | 3 |
| **Packing Group** | II |

**IMDG/IMP**

| | |
|---|---|
| **UN No.** | UN1294 |
| **Proper Shipping Name** | Toluene |
| **Hazard Class** | 3 |
| **Packing Group** | II |

**EMS-No: F-E, S-E**

## SECTION 15: REGULATORY INFORMATION

**United States**
**HCS Classification:** Flammable liquid, Toxic material, Irritating material, Target organ effects

**U.S. Federal regulations:**
**TSCA 8(a) IUR:** Partial exemption
**United States inventory (TSCA 8b):** Listed on inventory.
**SARA 302/304/311/312 extremely hazardous substances:** No products were found.
**SARA 302/304 emergency planning and notification:** No products were found.
**SARA 302/304/311/312 hazardous chemicals:** No products were found.
**SARA 311/312 MSDS distribution - chemical inventory - hazard identification:**
Toluene CAS# 108-88-3: (acute) health hazard, flammable.
**SARA 313 Form R – Reporting:**
Toluene CAS# 108-88-3 is reportable under section 313 and 40 CFR373.

**CERCLA:** Toluene CAS# 108-88-3 RQ 1000 lbs. (454 kg)

**DEA List I & II Chemicals**
**(Precursor Chemicals):** Toluene

**RTK STATES:** Toluene CAS# 108-88-3 FL, MA, MN, NJ, PA, CT

**California Prop. 65**
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.
Toluene CAS# 108-88-3

**CANADA**

**WHMIS (Canada):** Class B-2: Flammable Liquid
Class D-1A: Material causing immediate and serious toxic effects (Very Toxic)
Class D-2B: Material causing other toxic effects (Toxic)

**CEPA DSL / CEPA NDSL:** All components are listed or exempted.

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

**International regulations**

**International lists:**

**Australia inventory (AICS):** All components are listed or exempted.
**China inventory (IECSC):** All components are listed or exempted.
**Japan inventory:** All components are listed or exempted.
**Korea inventory:** All components are listed or exempted.
**New Zealand Inventory of Chemicals (NZIoC):** All components are listed or exempted.
**Philippines inventory (PICCS):** All components are listed or exempted.

## SECTION 16: OTHER INFORMATION

**National Fire Protection Association (U.S.A.)**

**DISCLAIMER:** This Safety Data Sheet has been prepared in accordance with the Globally Harmonized System for the Classification and Labelling of Chemicals (GHS). To the best of our knowledge, the information contained herein is accurate. However, neither the above named supplier nor any of its subsidiaries makes any warranty of merchantability or any other warranty, expressed or implied, which respect to such information, and we assume no liability resulting from its use. In no event shall Azer Scientific be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages resulting from use of or reliance upon this information.

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