

DATE: 07/17/03 ACCT: 888235001  
 INDEX: H31963909 CAT NO: SP15500 PO NBR: VS 7-15-03

## \*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

Permount Mounting Media  
 40131

## \*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: Permount Mounting Media

Catalog Numbers:  
 S70104, S80116, SP15-100, SP15-500

Synonyms:  
 A permanent adhesive for cementing cover glasses to microscope slides.

Company Identification: Fisher Scientific  
 1 Reagent Lane  
 Fairlawn, NJ 07410

For information, call: 201-796-7100

Emergency Number: 201-796-7100

For CHEMTREC assistance, call: 800-424-9300

For International CHEMTREC assistance, call: 703-527-3887

## \*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
108-88-3	Toluene	55	203-625-9
128-37-0	BHT	<1	204-881-4
68240-09-5	Polymer with alpha-pinene and beta-pinene	45	unlisted

Hazard Symbols: XN F  
 Risk Phrases: 11 20

## \*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

## EMERGENCY OVERVIEW

Appearance: yellow liquid. Flash Point: 4 deg C.  
 Warning! Flammable liquid and vapor. Causes respiratory tract irritation. Causes skin irritation. May cause eye irritation. This substance has caused adverse reproductive and fetal effects in animals. May cause central nervous system depression. Aspiration hazard if swallowed. Can enter lungs and cause damage. May cause liver damage. May cause kidney damage.  
 Target Organs: Kidneys, heart, central nervous system, liver.

## Potential Health Effects

**Eye:**  
 Causes eye irritation. May result in corneal injury. Vapors may cause eye irritation.

**Skin:**  
 May cause skin irritation. May be absorbed through the skin in harmful amounts. Prolonged and/or repeated contact may cause irritation and/or dermatitis.

**Ingestion:**  
 Aspiration hazard. May cause irritation of the digestive tract. May cause effects similar to those for inhalation exposure. Aspiration of material into the lungs may cause chemical pneumonitis, which may be fatal.

**Inhalation:**  
 Inhalation of high concentrations may cause central nervous system effects characterized by nausea, headache, dizziness, unconsciousness and coma. Inhalation of vapor may cause respiratory tract irritation. May cause heart disturbances, possibly leading to cardiac arrest and death.

**Chronic:**  
 Prolonged or repeated skin contact may cause dermatitis. May cause cardiac sensitization and severe heart abnormalities. May cause liver and kidney damage.

## \*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

**Eyes:**  
 Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid immediately.

**Skin:**  
 Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid if irritation develops or persists.

**Ingestion:**  
 Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupsfuls of milk or water. Possible aspiration hazard. Get medical aid immediately.

**Inhalation:**  
 Remove from exposure to fresh air immediately. If not breathing,

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give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

## Notes to Physician:

Causes cardiac sensitization to endogenous catecholamines which may lead to cardiac arrhythmias. Do NOT use adrenergic agents such as epinephrine or pseudoepinephrine.

## \*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*

## General Information:

Containers can build up pressure if exposed to heat and/or fire. As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Water runoff can cause environmental damage. Dike and collect water used to fight fire. Flammable Liquid. Can release vapors that form explosive mixtures at temperatures above the flashpoint. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Approach fire from upwind to avoid hazardous vapors and toxic decomposition products. Vapors are heavier than air and may travel to a source of ignition and flash back. Vapors can spread along the ground and collect in low or confined areas. This liquid floats on water and may travel to a source of ignition and spread fire. May accumulate static electricity.

## Extinguishing Media:

Use dry chemical, carbon dioxide, or alcohol-resistant foam.

Autoignition Temperature: 480 deg C ( 896.00 deg F)

Flash Point: 4 deg C ( 39.20 deg F)

Explosion Limits, lower: 1.2%

Explosion Limits, upper: 7.1%

NFPA Rating: (estimated) Health: 2; Flammability: 3; Instability: 0

## \*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

General Information: Use proper personal protective equipment as indicated in Section 8.

## Spills/Leaks:

Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite. Do not use combustible materials such as saw dust. Provide ventilation.

## \*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

## Handling:

Remove contaminated clothing and wash before reuse. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Avoid contact with heat, sparks and flame. Use only in a chemical fume hood. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames. Avoid breathing vapor.

## Storage:

Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances. Flammables-area. Separate from oxidizing materials.

## \*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

## Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate general or local explosion-proof ventilation to keep airborne levels to acceptable levels.

## Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
Toluene	50 ppm; skin - potential for cutaneous absorption	100 ppm TWA; 375 mg/m <sup>3</sup> TWA 500 ppm IDLH	200 ppm TWA; 300 ppm Ceiling
BHT	2 mg/m <sup>3</sup> (inhalable fraction, vapor and aerosol)	10 mg/m <sup>3</sup> TWA	none listed
Polymer with alpha-pinene and beta-pinene	none listed	none listed	none listed

OSHA Vacated PELs:  
 Toluene:  
 100 ppm TWA; 375 mg/m<sup>3</sup> TWA

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BHT:  
 10 mg/m3 TWA  
 Polymer with alpha-pinene and beta-pinene:  
 No OSHA Vacated PELs are listed for this chemical.

#### Personal Protective Equipment

**Eyes:**  
 Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin:**  
 Wear appropriate protective gloves to prevent skin exposure.

**Clothing:**  
 Wear appropriate protective clothing to prevent skin exposure.

**Respirators:**  
 Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

#### \*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Liquid  
 Color: yellow  
 Odor: aromatic odor  
 pH: Not applicable.  
 Vapor Pressure: 22 mm Hg @20C (toluene)  
 Vapor Density: 3.1 (air=1)  
 Evaporation Rate: Not available.  
 Viscosity: Not available.  
 Boiling Point: 111 deg C  
 Freezing/Melting Point: Not available.  
 Decomposition Temperature: Not available.  
 Solubility in water: Insoluble in water.  
 Specific Gravity/Density: Not available.  
 Molecular Formula: Mixture  
 Molecular Weight: 0

#### \*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

**Chemical Stability:**  
 Stable at room temperature in closed containers under normal storage and handling conditions.

**Conditions to Avoid:**  
 Ignition sources, excess heat.

**Incompatibilities with Other Materials:**  
 Strong oxidizing agents.

**Hazardous Decomposition Products:**  
 Carbon monoxide, carbon dioxide.

**Hazardous Polymerization:** Has not been reported.

#### \*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

**RTECS#:**  
 CAS# 108-88-3: XS5250000  
 CAS# 128-37-0: GO7875000  
 CAS# 68240-09-5 unlisted.

**LD50/LC50:**  
 Not available.  
 CAS# 128-37-0: Draize test, rabbit, eye: 100 mg/24H Moderate; Draize test, rabbit, skin: 500 mg/48H Moderate; Oral, mouse: LD50 = 650 mg/kg; Oral, rat: LD50 = 890 mg/kg.  
 CAS# 68240-09-5.

**Carcinogenicity:**  
 Toluene -  
 ACGIH: A4 - Not Classifiable as a Human Carcinogen  
 IARC: Group 3 carcinogen

BHT -  
 ACGIH: A4 - Not Classifiable as a Human Carcinogen  
 IARC: Group 3 carcinogen

Polymer with alpha-pinene and beta-pinene -  
 Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

**Epidemiology:**  
 No information available.

**Teratogenicity:**  
 Toluene: Specific developmental abnormalities included craniofacial effects involving the nose and tongue, musculoskeletal effects, urogenital and metabolic effects in studies on mice and rats by the inhalation and oral routes of exposure. Some evidence of fetotoxicity with reduced fetal weight and retarded skeletal development has been reported in mice and rats.

**Reproductive Effects:**  
 Toluene: Effects on fertility such as abortion were reported in rabbits by inhalation. Paternal effects were noted in rats by inhalation. These effects involved the testes, sperm duct and

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epididymis.  
 Neurotoxicity:  
 No information available.  
 Mutagenicity:  
 No information available.  
 Other Studies:  
 None.

#### \*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

**Ecotoxicity:**  
 Toluene: Bluegill LC50=17 mg/L/24H Shrimp LC50=4.3 ppm/96H Fathead minnow LC50=36.2 mg/L/96H Sunfish (fresh water) TLM=1180 mg/L/96H

#### \*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
 RCRA P-Series: None listed.  
 RCRA U-Series: CAS# 108-88-3: waste number U220.

#### \*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

**US DOT**  
 Shipping Name: FLAMMABLE LIQUIDS, N.O.S.  
 Hazard Class: 3  
 UN Number: UN1993  
 Packing Group: II

**Canadian TDG**  
 Shipping Name: TOLUENE SOLUTIONS  
 Hazard Class: 3  
 UN Number: UN1294  
 Other Information: FLASHPOINT 7C

#### \*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

**US FEDERAL**  
**TSCA**  
 CAS# 108-88-3 is listed on the TSCA inventory.  
 CAS# 128-37-0 is listed on the TSCA inventory.  
 CAS# 68240-09-5 is listed on the TSCA inventory.  
 Health & Safety Reporting List  
 CAS# 108-88-3: Effective Date: 10/4/82; Sunset Date: 10/4/92  
 Chemical Test Rules  
 None of the chemicals in this product are under a Chemical Test Rule.  
 Section 12b  
 None of the chemicals are listed under TSCA Section 12b.  
 TSCA Significant New Use Rule  
 None of the chemicals in this material have a SNUR under TSCA.

**SARA**  
 CERCLA Hazardous Substances and corresponding RQs  
 CAS# 108-88-3: 1000 lb final RQ; 454 kg final RQ  
 SARA Section 302 Extremely Hazardous Substances  
 None of the chemicals in this product have a TPQ.  
 SARA Codes  
 CAS # 108-88-3: acute, flammable.  
 CAS # 128-37-0: acute.  
 Section 313  
 This material contains Toluene (CAS# 108-88-3, 55%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 372.

**Clean Air Act:**  
 CAS# 108-88-3 is listed as a hazardous air pollutant (HAP).  
 This material does not contain any Class 1 Ozone depleters.  
 This material does not contain any Class 2 Ozone depleters.

**Clean Water Act:**  
 CAS# 108-88-3 is listed as a Hazardous Substance under the CWA.  
 CAS# 108-88-3 is listed as a Priority Pollutant under the Clean Water Act.  
 CAS# 108-88-3 is listed as a Toxic Pollutant under the Clean Water Act.

**OSHA:**  
 None of the chemicals in this product are considered highly hazardous by OSHA.

**STATE**  
 Toluene can be found on the following state right to know lists:  
 California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.  
 BHT can be found on the following state right to know lists:  
 California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.  
 Polymer with alpha-pinene and beta-pinene is not present on state lists from CA, PA, MN, MA, FL, or NJ.  
 WARNING: This product contains Toluene, a chemical known to the state of California to cause birth defects or other reproductive harm.

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California No Significant Risk Level:  
None of the chemicals in this product are listed.  
European/International Regulations  
European Labeling in Accordance with EC Directives  
Hazard Symbols: XN F  
Risk Phrases:

R 11 Highly flammable.  
R 20 Harmful by inhalation.

Safety Phrases:

S 16 Keep away from sources of ignition - No  
smoking.  
S 25 Avoid contact with eyes.  
S 29 Do not empty into drains.  
S 33 Take precautionary measures against static  
discharges.

WGK (Water Danger/Protection)

CAS# 108-88-3: 2  
CAS# 128-37-0: 1  
CAS# 68240-09-5: No information available.

United Kingdom Occupational Exposure Limits

CAS# 108-88-3: OES-United Kingdom, TWA 50 ppm TWA; 191 mg/m3 TWA  
CAS# 108-88-3: OES-United Kingdom, STEL 150 ppm STEL; 574 mg/m3 STEL  
CAS# 108-88-3: OES-United Kingdom, STEL 150 ppm STEL; 574 mg/m3 STEL

United Kingdom Maximum Exposure Limits

Canada

CAS# 108-88-3 is listed on Canada's DSL List.  
CAS# 128-37-0 is listed on Canada's DSL List.  
CAS# 68240-09-5 is listed on Canada's DSL List.  
This product has a WHMIS classification of B2, D2B.  
CAS# 108-88-3 is listed on Canada's Ingredient Disclosure List.  
CAS# 128-37-0 is listed on Canada's Ingredient Disclosure List.  
CAS# 68240-09-5 is not listed on Canada's Ingredient Disclosure List.

Exposure Limits

CAS# 108-88-3: OEL-AUSTRALIA:TWA 100 ppm (375 mg/m3);STEL 150 ppm (560  
mg/m3)  
OEL-BELGIUM:TWA 100 ppm (377 mg/m3);STEL 150 ppm (565 mg/m3)  
OEL-CZECHOSLOVAKIA:TWA 200 mg/m3;STEL 1000 mg/m3  
OEL-DENMARK:TWA 50 ppm (190 mg/m3);Skin  
OEL-FINLAND:TWA 100 ppm (375 mg/m3);STEL 150 ppm;Skin  
OEL-FRANCE:TWA 100 ppm (375 mg/m3);STEL 150 ppm (560 mg/m3)  
OEL-GERMANY:TWA 100 ppm (380 mg/m3)  
OEL-HUNGARY:TWA 100 mg/m3;STEL 300 mg/m3;Skin  
OEL-JAPAN:TWA 100 ppm (380 mg/m3)  
OEL-THE NETHERLANDS:TWA 100 ppm (375 mg/m3);Skin  
OEL-THE PHILIPPINES:TWA 100 ppm (375 mg/m3)  
OEL-POLAND:TWA 100 mg/m3  
OEL-RUSSIA:TWA 100 ppm;STEL 50 mg/m3  
OEL-SWEDEN:TWA 50 ppm (200 mg/m3);STEL 100 ppm (400 mg/m3);Skin  
OEL-SWITZERLAND:TWA 100 ppm (380 mg/m3);STEL 500 ppm  
OEL-THAILAND:TWA 200 ppm;STEL 300 ppm  
OEL-TURKEY:TWA 200 ppm (750 mg/m3)  
OEL-UNITED KINGDOM:TWA 100 ppm (375 mg/m3);STEL 150 ppm;Skin  
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV  
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV  
CAS# 128-37-0: OEL-AUSTRALIA:TWA 10 mg/m3  
OEL-BELGIUM:TWA 10 mg/m3  
OEL-FINLAND:TWA 10 mg/m3;STEL 20 mg/m3;Skin  
OEL-FRANCE:TWA 10 mg/m3  
OEL-THE NETHERLANDS:TWA 10 mg/m3  
OEL-SWITZERLAND:TWA 10 mg/m3  
OEL-UNITED KINGDOM:TWA 10 mg/m3  
OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA check ACGIH TLV  
OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 5/20/1999 Revision #5 Date: 8/16/2001

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company 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, howsoever arising, even if the company has been advised of the possibility of such damages.