MATERIAL SAFETY DATA SHEET

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

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FOR PRODUCT AND SALES INFORMATION

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PRODUCT IDENTIFICATION

PRODUCT NAME: Permount Solution

COMPOSITION, INFORMATION ON INGREDIENTS

COMPONENT: Toluene
CAS #: 108-88-3
PERCENT: 55.17
EINECS#: 203-625-9

COMPONENT: Piccolyte(B-pinene polymer)
CAS #: 68240-09-5
PERCENT: 44.85
EINECS#: unlisted

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

APPEARANCE: Yellow. Flash Point 45oF.

WARNING! Flammable liquid. 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. Causes digestive tract irritation. 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. 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 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.

FIRST AID MEASURES

EYES:	Flush eyes with plenty of water for at least 15 minutes occasionally lifting the upper and lower lids. 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 cupfuls of milk or water. Possible aspiration hazard. Get medical aid immediately.

INHALATION: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

NOTES TO PHYSICIAN: Causes cardiac sensitization to endogenous catelcholamines which may lead to cardiac arrhythmias. Do NOT use adrenergic agents such as epinephrine or pseudoepinephrine.

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. Vapors can travel to a source of ignition and flash back. 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.

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

AUTOIGNITION TEMP: Not applicable.

FLASH POINT: 45oF (7.22oC)

NFPA RATING: Not published.

EXPLOSION LIMITS: LOWER: 1.4
UPPER: 6.7

ACCIDENTAL RELEASE MEASURES

GENERAL INFORMATION: Use proper personal protective equipment as indicated in section titled EXPOSURE CONTROLS, PERSONAL PROTECTION.

SPILLS/LEAKS: Remove all sources of ignition. Absorb spill using an absorbent, non-combustible material such as earth, sand, or vermiculite.

HANDLING AND STORAGE

HANDLING: Remove contaminated clothing and wash before reuse. Use with adequate ventilation. 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. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

STORAGE: Keep away from sources of ignition. Store in a cool, dry, well-ventilated area away from incompatible substances.

EXPOSURE CONTROLS, PERSONAL PROTECTION

ENGINEERING CONTROLS: Use adequate general or local exhaust ventilation to keep airborne concentration below the permissible exposure limits.

EXPOSURE LIMITS: TOLUENE:

- ACGIH: 50 ppm; 188 mg/m3; skin-potential for cutaneous absorption.
- NIOSH: 100 ppm TWA; 375 mg/m3 TWA 500 ppm IDLH
- OSHA-Final PELs:200 ppm TWA;C 300 ppm;C 300 ppm

PICCOLYTE(B-PINENE POLYMER):

- ACGIH: none listed.
- NIOSH: none listed.
- OSHA-Final PELs: none listed.

OSHA VACATED PELS: TOLUENE: 100 ppm TWA; 375 mg/m3 TWA
PICCOLYTE(B-PINENE POLYMER): 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.

PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE:	Liquid.
APPEARANCE:	Yellow.
ODOR:	None reported.
pH:	Not available.
VAPOR PRESSURE:	Not available.
VAPOR DENSITY:	Not available.
EVAPORATION RATE:	Not available.
VISCOSITY:	Not available.
BOILING POINT:	Not available.
FREEZING/MELTING POINT:	Not available.
DECOMPOSITION TEMPERATURE:	Not available.
SOLUBILITY:	Insoluble in water.
SPECIFIC GRAVITY/DENSITY:	Not available.
MOLECULAR FORMULA:	Mixture.
MOLECULAR WEIGHT:	Not available.

STABILITY AND REACTIVITY

CHEMICAL STABILITY: Stable at room temperature in closed containers under normal storage and handling conditions.

CONDITIONS TO AVOID: Incompatible materials, ignition sources, excess heat.

INCOMPATIBILITIES WITH OTHER MATERIALS: Toluene is incompatible with bromine trifluoride, 1,3-dichloro-5,5-dimethyl-2,4-imidazolididione, dintrogen tetroxide, concentrated nitric acid, nitric acid + sulfuric acid, silver perchlorate, strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS: Carbon monoxide, carbon dioxide.

HAZARDOUS POLYMERIZATION: Has not been reported.

TOXICOLOGICAL INFORMATION

RTECS# CAS# 108-88-3: XS5250000
CAS# 68240-09-5: unlisted.

LD50/LC50: CAS# 108-88-3: Inhalation, mouse: LC50=400ppm/24H; Inhalation, rat: LC50=49 gm/m3/4H; Oral, rat: LD50=636 mg/kg; Skin, rabbit: LD50=12124 mg/kg.

CAS# 68240-09-5.

CARCINOGENICITY:

TOLUENE-

ACGIH: A4-Not Classifiable as a Human Carcinogen.

IARC: Group 3 carcinogen

PECULATE(B-PINENE POLYMER) -

Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

EPIDEMIOLOGY: No information available.

TERATOGENICITY:

TOLUENE: Specified 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 epididymis.

NEUROTOXICITY: No information available.

MUTAGENICITY: No information available.

OTHER STUDIES: None.

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

ENVIRONMENTAL FATE:

TOLUENE: From soil, substance evaporates and is microbially biodegraded. In water, substance volatilizes and biodegrades.

PHYSICAL/CHEMICAL:

TOLUENE: Photochemically produced hydroxyl radicals degrade substance.

OTHER: None.

DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

RCDA D-Series Maximum Concentratrion of Contaminents: None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None.
RCRA F-None Listed.
RCRA P-None Listed.
RCRA U-SERIES: CAS# 108-88-3: waste number U220.

TRANSPORT INFORMATION

US DOT
SHIPPING NAME: Flammable Liquid, N.O.S. (Contains Toluene)
HAZARD CLASS: 3
UN NUMBER: UN1993
PACKING GROUP: II
IMO
No information available.
IATA
No information available.
RID/ADR
No information available.
CANADIAN TDG
SHIPPING NAME: Toluene Solutions
HAZARD CLASS: 3(9.2)
UN NUMBER: UN1294
OTHER INFORMATION: Flashpoint 7oC

REGULATORY INFORMATION

US FEDERAL
TSCA
CAS# 108-88-3 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: October 4, 1982; Sunset Date: October 4, 1992
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
SECTION 302 (RQ)
CAS# 108-88-3: Final RQ=1000 pounds (454 kg)
SECTION 302 (TPQ):
None of the chemicals in this product have a TPQ.
SARA CODES:

CAS# 108-88-3: Acute, flammable.

SECTION 313:

This material contains Toluene (CAS# 108-88-3, 55.17%), which is subject to the reporting requirements of Section 313 of SARA Title III and 40 CFR Part 373.

CLEAN AIR ACT:

CAS# 108-88-3 is lised as a hazardous air polutant (HAP).
This material does not contain any Class 1 Ozone depletors.
This material does not contain any Class 2 Ozone depletors.

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.

Piccolyte(B-pinene polymer) is not present on state lists from CA, PA, MN, MA, FL, or NJ.

EUROPEAN/INTERNATIONAL REGULATIONS:

EUOPEAN LABELING IN ACCORDANCE WITH EC DIRECTIVES:

HAZARD SYMBOLS: Not available.
RISK PHRASES:
SAFETY PHRASES:

WGK (WATER DANGER/PROTECTION):

CAS# 108-88-3: 2
CAS# 68240-09-5: No information avialable.

CANADA:

CAS# 108-88-3 is listed in Canada's DSL/NDSL List.
CAS# 68240-09-5 is listed on Canada's DSL/NDSL List.
This product has a WHMIS classification of B2, D2B.
CAS# 108-88-3 is not 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 30 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; STELL 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, COLUMBIA, JORDAN, KOREA check ACGIH TLV. OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV.