

PANNIER CORPORATION
207 SANDUSKY STREET, PITTSBURGH, PA 15212-5823 U.S.A.
MATERIAL SAFETY DATA SHEET

1052-M REV 6
December 8, 2005
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IMPORTANT: Read this MSDS before handling and disposing of this product, and pass this information on to employees, customers and all users of this product.

SECTION I – PRODUCT INFORMATION

Product Name: 1052-M Solvent
Uses: Use as a solvent only in industrial manufacturing processes.
Company: Pannier Corporation
207 Sandusky Street
Pittsburgh, PA 15212-5823
USA
Emergency Telephone Number: **CHEMTREC DOMESTIC 24-HOUR: 800-424-9300**
CHEMTREC INTERNATIONAL: 703-527-3887
HMIS Rating: H:1 F: 3 R: 0

SECTION II – INGREDIENT INFORMATION

Ingredient Name	CAS Number	Concentration
Propylene Glycol Monomethyl Ether	107-98-2	100%

SECTION III – HAZARDS IDENTIFICATION

Emergency Overview

Appearance and Odor: Clear, Liquid, Ethereal

Safety Hazards : Flammable liquid and vapor. Vapors are heavier than air. Vapors may travel across the ground and reach remote ignition sources causing a flashback fire danger. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire.

Inhalation: Slightly irritating to respiratory system.

Skin Contact: May cause moderate irritation to skin.

Eye Contact: Moderately irritating to eyes.

Signs and Symptoms: Eye irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blurred vision. Skin irritation signs and symptoms may include a burning sensation, redness, swelling, and/or blisters. Respiratory irritation signs and symptoms may include a temporary burning sensation of the nose and throat, coughing, and/or difficulty breathing.

SECTION IV – FIRST AID MEASURES

General Information: In general no treatment is necessary. However, obtain medical advice.

Inhalation: Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.

Skin Contact: Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.

Eye Contact: Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.

Ingestion: If swallowed, do not induce vomiting; transport to nearest medical facility for additional treatment. IF vomiting occurs spontaneously, keep head below hips to prevent aspiration.

Advice to Physician: Causes central nervous system depression. Potential for chemical pneumonitis. Consider: gastric lavage with protected airways; administration of activated charcoal. Consult a Poison Control Center for guidance

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SECTION V – FIRE FIGHTING MEASURES

Clear fire area of all non-emergency personnel.

Flash Point: 30°C / 86°F (Abel)

Explosion/Flammability limits in air: 1.9-13.1 % (V)

Auto Ignition temperature: 290°C / 554°F (ASTM E-659)

Specific Hazards: Carbon monoxide may be evolved if incomplete combustion occurs. The vapor is heavier than air, spreads along the ground and distant ignition is possible.

Extinguishing Media: Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only. Do not discharge extinguishing waters into the aquatic environment.

Protective Equipment for Firefighters: Wear full protective clothing and self-contained breathing apparatus.

Additional advice: Keep adjacent containers cool by spraying with water.

SECTION VI–ACCIDENTAL RELEASE MEASURES

Observe all relevant local and international regulations.

Protective measures: Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Section 8 of this Material Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Material Safety Data Sheet. Shut off leaks, if possible without persona risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempts to disperse the vapor or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor areas with combustible gas indicator.

Clean Up Methods: For large liquid spills (> 1 drum) transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely. For small spills (< 1 drum) transfer by mechanical means to a labeled, sealable container for product recovery or safe disposal. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

Additional Advice: See Section 13 for information on disposal. Notify authorities if any exposure to the general public or the environment occurs. Or is likely to occur. Vapor may form an explosive mixture with air.

SECTION VII – HANDLING AND STORAGE

General Precautions: Avoid breathing of or contact with material. Only use in well ventilated areas. Wash thoroughly after handling. For guidance on selection of personal protective equipment see Section 8 of this Material Safety Data Sheet. Use the information in this data sheet as input to a risk assessment of local circumstances to help determine appropriate controls for safe handling, storage and disposal of this material.

Handling: Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge (≤ 10 m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging or handling operations. Extinguish any naked flames. Do NOT smoke. Remove ignition sources. Avoid sparks. Handling Temperature: Ambient.

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Storage: Keep away from aerosols, flammables, oxidizing agents, corrosives and from products harmful or toxic to man or to the environment. Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Must be kept inhibited during storage and shipment as material can polymerize. Storage Temperature: Ambient.

Product Transfer: Keep containers closed when not in use. Do not use compressed air for filling, discharging or handling.

Recommended Materials: For containers, or container linings use mild steel, stainless steel.

Unsuitable Materials: Aluminum; Most Plastics; Natural, butyl, neoprene or nitrile rubbers.

Container Advice: Containers, even those than have been emptied, can contain explosive vapors. Do not cut, drill, grind, weld or perform similar operations on or near containers.

Additional Information: Glycol ethers can be peroxide formers.

SECTION VIII- EXPOSURE CONTROL / PERSONAL PROTECTION

Material	Source	Type	ppm	mg/m3
Propylene Glycol Monomethyl Ether	ACGIH	TWA	100 ppm	
	ACGIH	STEL	150 ppm	
	OSHA Z1A	TWA	100 ppm	360 mg/m3
	OSHA Z1A	STEL	150 ppm	540 mg/m3

Additional Information: Standards are the OSHA PELs that were established in 1989 and alter rescinded. Wash hands before eating, drinking, smoking and using the toilet.

Exposure Controls: The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Eye washes and showers for emergency use.

Personal Protective Equipment: Personal protective equipment (PPE) should meet recommended national standards. Check with PPE suppliers.

Respiratory Protection: If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Check with respiratory protective equipment suppliers. Where air-filtering respirators are suitable, select an appropriate combination of mask and filter. Where air-filtering respirators are unsuitable (e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus. Select a filter suitable for organic gases and vapors [boiling point 65 °C / 149°F]. Longer term protection: Natural rubber. Butyl rubber, Nitrile rubber. Incidental contact/Splash protection: PVC, Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced.

Hand Protection:

Eye Protection: Chemical splash goggles (chemical monogoggles).

Protective Clothing: Use protective clothing, which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

Environmental Exposure Controls: Local guidelines on emission limits for volatile substances must be observed for the discharge of exhaust air containing vapor.

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SECTION IX - PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Clear Liquid
Odor:	Ethereal
Boiling Range:	117-125°C / 243-257 °F
Flash Point:	30°C / 86°F (Abel)
Explosion / Flammability Limits in Air	1.9-13.1 % (V)
Auto-Ignition temperature:	290°C / 554°F (ASTM E-659)
Vapor Pressure:	1,170 Pa at 20°C / 68°F
Specific Gravity:	0.92 at 20°C / 68°F
Vapor Density (air = 1):	3.1
Volatile organic carbon content:	100%
Evaporation rate (nBuAc=1):	0-.75 (ASTM D 3539, nBuAc=1)

SECTION X - STABILITY AND REACTIVITY

Stability:	Stable under conditions of use. Glycol ethers can be peroxide formers. Potential exists for runaway reaction at elevated temperatures in the presence of strong bases and salts of strong bases. Reacts with strong oxidizing agents. Oxidizes on contact with air to form unstable peroxides.
Conditions to avoid:	Exposure to air. Avoid heat, sparks, open flames and other ignition sources.
Materials to avoid:	Strong oxidizing agents. Aluminum Acids. Strong bases. Salts of strong bases.
Hazardous Decomposition Products:	Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.
Hazardous Reactions:	Hygroscopic.

SECTION XI - TOXICOLOGICAL INFORMATION

Basis for Assessment:	Information is given based on product testing.
Acute Oral Toxicity:	Low toxicity: LD50 > 2000 mg/kg, Rat
Acute Dermal Toxicity:	Low toxicity: LD50 > 2000 mg/kg, Rabbit
Acute Inhalation Toxicity:	Low toxicity: LD50 > 5000 ppm/ 1 hour, Rat
Skin Irritation:	May cause moderate skin irritation
Eye Irritation:	Moderately irritating to eyes
Respiratory Irritation:	Inhalation of vapors or mists may cause irritation to the respiratory system.
Sensitization:	Not a skin sensitiser
Repeated Dose Toxicity:	Kidney: caused kidney effects in male rats which are not considered relevant to humans.
Reproductive and Developmental Toxicity:	Causes foetotoxicity in animals at does which are maternally toxic.

SECTION XII - ECOLOGICAL INFORMATION

Acute Toxicity:	
Fish:	Low toxicity: LC/EC/IC50 > 1000 mg/l
Aquatic Invertebrates:	Low toxicity: LC/EC/IC50 > 1000 mg/l
Algae:	Low toxicity: LC/EC/IC50 > 1000 mg/l
Microorganisms:	Low toxicity: LC/EC/IC50 > 1000 mg/l
Mobility:	If product enters soil, it will be highly mobile and may contaminate groundwater. Dissolves in water.

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Paralstence/degradability: Readily biodegradable meeting the 10 day window criterion. Oxidizes rapidly by photo-chemical reactions in air.
Bioaccumulation: Not expected to bioaccumulate significantly.

SECTION XIII - DISPOSAL CONSIDERATIONS

Material Disposal: Recover or recycle if possible. It is the responsibly of the waste generator to determine the toxicity and physical properties of the materials generated to determine the proper waste classification and disposal methods in compliance with the applicable regulations.

Container Disposal: Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

Local Legislation: Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements and must be complied with.

SECTION XIV - TRANSPORT INFORMATION

US Department of Transportation Classification (49CFR)

Identification number	UN 3092
Proper shipping name	1-Methoxy-2-propanol
Class / Division	3
Packing group	III

Emergency Responsive Guide: 129

IMDG

Identification number	UN 3092
Proper Shipping Name	1-Methoxy-2-propanol
Class / Division	3
Packing group	III
Marine pollutant	No

IATA (Country variations may apply)

Identification number	UN 3092
Proper shipping name	1-Methoxy-2-propanol
Class / Division	3
Packing group	III

SECTION XV - REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

Federal Regulatory Status

Notification Status

AICS	Listed
DSL	Listed
INV (CN)	Listed
ENCS (JP)	Listed (2) - 404

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TSCA	Listed
EINECS	Listed 203-539 -1
KECI (DR)	Listed KE-23379
PICCS (PH)	Listed

SARA Hazard Categories (311/312)

Immediate (Acute) Health Hazard. Fire Hazard.

DISCLAIMER OF LIABILITY

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