

Mass. Trade Secret No: 00-000-00

Material Safety Data Sheet (MSDS). May be used to comply with OSHA Hazard Communication Standard 29CFR 1910.1200. Standard must be consulted for specific requirements. U.S. Department of Occupational Safety & Health Administration (Non-Mandatory Form) Form approved. OMB No. 1218-0072.

IDENTITY (As used on Label and List): Note: Blank spaces are not permitted. If any item is not applicable, or no information is available, the space must be so marked.

COPPERIZING SOLUTION

PRODUCT CODE NO: P5667

Manufacturer's Name: Emergency Phone No: 978-658-5290

PRINTERS OIL SUPPLY CO, INC

Address:

310 Ballardvale Street, Wilmington, MA 01887

24 Hour Emergency: 800-424-9300 Telephone Number For Information: 978-658-5290

Issue Date: 09/25/09

Signature of Preparer: (Optional):

PRODUCT NAME: COPPERIZING SOLUTION PRODUCT CODE NO: P5667

DOT INFO: UN2924, Flammable liquids, corrosive, 3 (8), II

SECTION I - HAZARDOUS INGREDIENTS AND EXPOSURE LIMITS:

INGREDIENTS	C.A.S. NUMBER		EXPOSURE LEVELS PPM AGENCY TYPE		<u>PERCENTAGE</u> <u>E</u>
butoxyethanol**	111-76-2	25-skin	ACGIH	TWA	<10
hydrogen chloride**	7647-01-1	5	ACGIH/OSHA	TWA	< .2
ethylene glycol**	107-21-1	50	ACGIH/OSHA	TLV/CEIL	<45
isopropanol	67-63-0	400	ACGIH/OSHA	TWA	
cuprous chloride**	7758-89-6		Not estabilshed		< 4

Specific Chemical identities withheld under Trade Secret Status

SECTION II - EMERGENCY AND FIRST AID PROCEDURES:

EYE CONTACT:

If irritation or redness, from vapor exposure, develops, move victim away from exposure source. If irritation or redness persists, seek Medical attention. For direct contact, hold eyelids apart and flush affected eye(s) with clean water for 20 minutes. Seek Medical attention.

SKIN CONTACT:

Remove contaminated clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water. If irritation or redness develops and/or persists, seek Medical attention.

^{**} Designates a substance which must be reported under the requirements of SARA Title III-313 and 40 CFR 372

PRODUCT NAME: POSCO COPPERIZING SOLUTION

PRODUCT CODE NO: P5667

PAGE 2 OF 4

INHALATION (BREATHING):

If respiratory or other overexposure symptoms develop, move victim away from exposure source into fresh air. If symptoms persist, seek immediate Medical attention. If victim is not breathing, artificial respiration should be administered. If breathing difficulty is experienced, qualified personnel should administer Oxygen. Seek Medical attention.

INGESTION (SWALLOWING):

Aspiration Hazard: Do not induce vomiting, or give anything by mouth. Vomited material can enter the lungs and cause lung damage. If victim is drowsy or unconscious, place on left side with head down. If possible, do not leave victim unattended.

COMMENTS (Note to Physician):

Epinephrine and other sympathomimetic drugs may potentiate arrhythmia in persons exposed to this substance. Such drugs should be used cautiously, if at all, and only with cardiac monitoring.

SECTION III - HEALTH HAZARDS AND ROUTES OF ENTRY:

EYE CONTACT:

This material will irritate the eyes. Direct contact with the liquid or exposure to the vapor or mist may cause tearing, stinging and redness.

SKIN CONTACT:

This material may cause skin irritation. Prolonged or repeated exposure to this material may cause redness, burning and cracking or drying of skin. Contact may result in skin absorption, but toxicity symptoms via this route are unlikely, under normal conditions. Persons with pre-existing conditions may be more susceptible to the effects of this material.

INHALATION (BREATHING):

While this material has a low degree of toxicity, inhaling of large amounts of mists or vapors may cause irritation of mucous membranes, nervous system depression (drowsiness, fatigue, motor coordination loss), nausea and headaches. Prolonged or repeated exposure to mists or vapor may damage peripheral nerves. Respiratory symptoms, associated with pre-existing conditions, may be exaggerated upon exposure to this material.

INGESTION:

While this material has a low degree of toxicity, ingestion of excessive amounts may cause irritation of the digestive tract. Signs of nervous system depression (dizziness, fatigue, drowsiness, motor coordination loss) and nausea may develop.

COMMENTS:

NTP, IARC or OSHA has not identified this material as a carcinogen, or probable carcinogen. Pre-existing peripheral nerve disorders may be aggravated by exposure to this material. Persons with pre-existing heart disorders may be more susceptible to irregular heartbeats if exposed to high concentrations of this material (See Section II-Note to Physician). Reports have associated repeated and/or prolonged exposures to solvents with permanent brain or nervous system damage (sometimes referred to as Solvent or Painter's Syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

SYSTEMIC EFFECTS AND OTHER EFFECTS:

Chronic overexposure to Solvent EB in high concentrations has caused anemia, liver and blood abnormalities, and kidney and lung damage in laboratory animals; may cause maternal toxicity.

PRODUCT NAME: POSCO COPPERIZING SOLUTION

PRODUCT CODE NO: P5667

PAGE 3 OF 4

SECTION IV - SPECIAL PROTECTION INFORMATION:

VENTILATION:

If existing ventilation is inadequate to maintain airborne concentration below prescribed exposure limits (See Section I), additional ventilation or exhaust systems may be needed.

RESPIRATORY PROTECTION:

If airborne concentrations exceed prescribed exposure limits, use a respirator or gas mask, with appropriate cartridges and canisters (NIOSH approved), or mask with an air supply.

PROTECTIVE GLOVES:

We recommend the use of gloves that are impermeable to the specific hazardous materials present in this product.

SECTION V - REACTIVITY DATA:

STABILITY: Stable HAZARDOUS POLYMERIZATION: Will not occur INCOMPATIBILITY (Materials to avoid): Strong acids or bases, strong oxidizers, amines HAZARDOUS DECOMPOSITION: Will not occur

SECTION VI - SPILL OR LEAK PROCEDURES:

PRECAUTIONS IN CASE OF RELEASE OR SPILL:

Stay upwind from spill. Keep all ignition sources away from spill area. Ventilate spill area. Absorb with absorbent. Keep out of waterways.

WASTE DISPOSAL METHOD:

Dispose of in accordance with all Local, County, State and Federal regulations.

SECTION VII - STORAGE AND SPECIAL PRECAUTIONS:

HANDLING AND STORAGE PRECAUTIONS:

Keep containers closed in a cool environment. Avoid all sources of heat, spark, or other ignition. Use and store with proper ventilation. Avoid direct contact and inhalation of vapors. Practice good hygiene. "Empty" containers can be dangerous and should be so treated. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose to heat, sparks, or other ignition sources; they may explode and cause injury or death. Empty drums should be properly drained and returned to Supplier or to a drum reconditioner. All other containers should be disposed of in an environmentally sound manner.

PRODUCT NAME: POSCO COPPERIZING SOLUTION

PRODUCT CODE NO: P5634

PAGE 4 OF 4

SECTION VIII - FIRE AND EXPLOSION HAZARD DATA:

HEALTH: 3 <u>HAZARD RATING SCALE</u>

HAZARD CLASS FLAMMABILITY: 3

REACTIVITY: 2 0=minimal 1=slight
PERSONAL PROTECTION: B 2=moderate 3=high
4=extreme

EXPLOSIVE LIMITS (Volume %): LOWER: 1.1 UPPER: 10.6 FLASH POINT (TOC): 65°F

EXTINGUISHING MEDIA:

Dry chemical, carbon dioxide, universal type foam.

FIRE AND EXPLOSION HAZARDS:

Flashback along vapor trail may occur. This material is **FLAMMABLE** and should not be used near heat, spark, or flame, or static electricity. If container is not properly cooled, it may explode in case of fire.

FIRE FIGHTING PROCEDURES:

Use of Self Contained Breathing Apparatus (SCBA) is recommended for Firefighters. Water spray may be useful to cool nearby containers and to minimize vapor. Avoid spreading burning liquid with the cooling water.

SECTION IX - PHYSICAL DATA:

Vapor Density: **Approximate Boiling Point:** >212°F ND % Volatile: 100 **Evaporation Rate (n-butyl acetate=1.0):** NA **Vapor Pressure (in mm mercury):** 17.8 % Water Soluble: Nil **Specific Gravity:** 1.009 (8.40 lb/gal) Odor: Characteristic Appearance: **Blue-Green Solution Melting Point:** NA pH: NA V.O.C. (lb/gal): 7.31

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:

Information contained herein is believed to be accurate as of the issue date. However, no Warranty of Merchantability, Fitness for any purpose, or any other warranty is expressed or to be implied regarding the accuracy or completeness of this information, or the product, or hazards relating to its use. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk for his use thereof.