

PANNIER CORPORATION
207 SANDUSKY STREET, PITTSBURGH, PA 15212-5823 U.S.A.

MATERIAL SAFETY DATA SHEET

#620 SOLVENT
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MARCH 3, 1997 - Rev. 1

IMPORTANT: Read this MSDS before handling and disposing of this product and pass this information on to employees, customers and users of this product.

SECTION I - GENERAL INFORMATION **24 HOUR EMERGENCY TELEPHONE NUMBER: 800-424-9300**
INTERNATIONAL EMERGENCY TELEPHONE NUMBER: 703-527-3887

TRADE NAME: PANNIER "MASTER MARKER"
GENERIC NAME: Spray Ink Solvent
CHEMICAL FAMILY: Ketone
CAS NO.: 78-93-3
DOT HAZARDOUS MATERIALS PROPER SHIPPING NAME: Ethyl Methyl Ketone
DOT HAZARD CLASS: Flammable Liquid
UN/NA ID NO.: UN 1193
HMIS CODES: 3H, 3F, 0R

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS NUMBER	PERCENT AGE	OCCUPATIONAL EXPOSURE LIMITS
Ethyl Methyl Ketone	78-93-3	100	200 PPM PEL/TWA OSHA 300 PPM PEL/STEL OSHA 200 PPM TLV/TWA ACGIH 300 PPM TLV/STEL ACGIH

SECTION III - PHYSICAL DATA

BOILING POINT: 175°F
SPECIFIC GRAVITY (H₂O=1) 0.81
MELTING POINT: -124°F
VAPOR PRESSURE: 70.9 MM Hg at 68°F
VAPOR DENSITY(AIR=1): 2.5
SOLUBILITY IN WATER: Appreciable
EVAPORATION RATE (N-Butyl Acetate=1): 3.8
APPEARANCE AND ODOR: Colorless, Mobile Liquid, Pungent Odor
MATERIAL V.O.C.: 6.67 LB/GL (799.2 G/L)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 23°F
METHOD USED: TCC
FLAMMABLE LIMITS / % VOLUME IN AIR: LOWER: 1.8% UPPER: 11.5%

EXTINGUISHING MEDIA: Use water fog, "alcohol" foam, dry chemical or CO₂.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Containers exposed to intense heat from fires should be cooled with water to prevent vapor pressure buildup which could result in container rupture. Container areas exposed to direct flame contact should be cooled with large quantities of water as needed to prevent weakening of container structure.

SPECIAL FIREFIGHTING PROCEDURES AND PRECAUTIONS: WARNING: Flammable. Clear fire area of unprotected personnel. Do NOT enter confined fire space without full bunker gear (helmet with face shield, bunker coats, gloves and rubber boots), including a positive pressure NIOSH approved self-contained breathing apparatus. Cool fire exposed containers with water.

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SECTION V - REACTIVITY DATA

STABILITY: Stable

CONDITIONS TO AVOID: Heat, sparks and open flame.

INCOMPATIBILITY (MATERIALS TO AVOID): Contact with strong oxidizing agents.

HAZARDOUS POLYMERIZATION: Will not occur.

HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS: Carbon monoxide and unidentified organic compounds may be formed during combustion. One hazardous combustion product, methyl vinyl ketone, has been found in the combustion zone of a plant incinerator burning waste mek. This information was supplied to EPA under FYI# OTS-0189-0661 by Hercules, Inc.

SECTION VI - HEALTH HAZARD DATA

SUPPLEMENTAL HEALTH INFORMATION:

In female rats exposed by inhalation to over 1000 PPM (5 times the OSHA PEL/TWA) minor embryotoxic/fetotoxic effects were observed.

Methyl ethyl ketone has been demonstrated to potentiate (i.e., shorten the time of onset) the peripheral neuropathy caused by either N-hexane or methyl N-butyl ketone. Mek by itself has not been demonstrated to cause peripheral neuropathy.

ACUTE TOXICITY DATA:

ACUTE ORAL LD50: 3.4 G/KG (rat)

ACUTE DERMAL LD50: 8 ML/KG (rabbit)

ACUTE INHALATION LC50: 8000 PPM/8H (rat)

EMERGENCY FIRST AID PROCEDURES

EYE CONTACT: Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Get medical attention.

SKIN CONTACT: Flush skin with water while removing contaminated clothing and shoes. If irritation occurs, get medical attention. Do NOT reuse clothing or shoes until cleaned.

INHALATION: Remove victim to fresh air and provide oxygen if breathing is difficult. Give artificial respiration if not breathing. Get medical attention.

INGESTION: Do NOT give liquids if victim is unconscious or very drowsy. Otherwise, give no more than 2 glasses of water and induce vomiting by giving 30 cc (2 tablespoons) Syrup of Ipecac.* If Ipecac is unavailable, give 2 glasses of water and induce vomiting by touching finger to back of victim's throat. Keep victim's head below hips while vomiting. Get medical attention.

NOTE TO PHYSICIAN: *If victim is a child, give no more than 1 glass of water and 15 cc (1 tablespoon) Syrup of Ipecac. If symptoms such as loss of gag reflex, convulsions or unconsciousness occur before emesis, gastric lavage should be considered following intubation with a cuffed endotracheal tube.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

RESPIRATORY PROTECTION: Avoid prolonged or repeated breathing of vapors. If exposure may or does exceed occupational limits (Section IV), use a NIOSH approved respirator as required to prevent overexposure. In accordance with 29 CFR 1910.134, use either a full-face, atmosphere-supplying respirator or an air-purifying respirator for organic vapors. OSHA has established transitional occupational exposure limits for this product and/or components of this product. Refer to 29 CFR 1910.1000 for these transitional limits and requirements for meeting these limits.

PROTECTIVE CLOTHING: Avoid contact with eyes. Wear chemical goggles if there is likelihood of contact with eyes. Avoid prolonged or repeated contact with skin. Wear chemical-resistant gloves and other

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clothing as required to minimize contact. Test data from published literature and/or glove and clothing.*

ADDITIONAL PROTECTIVE MEASURES: *Manufacturers indicate the best protection is provided by butyl. Use explosion-proof ventilation as required to control vapor concentration. Air dry contaminated clothing in a well ventilated area, then launder before re-using.

SECTION VIII - CONTROL MEASURES

SPILL OR LEAK PROCEDURES: WARNING: Flammable. Eliminate all ignition sources. Handling equipment must be grounded to prevent sparking.

****Large Spills**** Evacuate the hazard area of unprotected personnel. Wear appropriate respirator and other protective clothing. Shut off source of leak only if safe to do so. Dike and contain. If vapor cloud forms, water fog may be used to suppress; contain run-off. Remove with vacuum trucks or pump to storage/salvage vessels. Soak up residue with an absorbent, such as clay, sand, or other suitable material; place in non-leaking containers and seal tightly for proper disposal. Flush area with water to remove trace residue; dispose of flush solution as above.

****Small Spills**** Take up with an absorbent material and place in non-leaking containers for proper disposal.

SECTION IX - SPECIAL PRECAUTIONS

Keep liquid and vapor away from heat, sparks and flame. Surfaces that are sufficiently hot may ignite even liquid product in the absence of sparks or flame. Extinguish pilot lights, cigarettes, and turn off other sources of ignition prior to use and until all vapors are gone. Vapors may accumulate and travel to ignition sources distant from the handling site; flashfire can result. Keep containers closed when not in use. Use with adequate ventilation.

Containers, even those that have been emptied, can contain explosive vapors. Do NOT cut, drill, grind, weld or perform similar operations on or near containers.

Static electricity may accumulate and create a fire hazard. Ground fixed equipment. Bond and ground transfer containers and equipment.

SECTION X - REGULATORY INFORMATION

SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT OF 1986 (SARA) TITLE III TOXIC CHEMICAL(S)

SUBJECT TO THE REPORTING REQUIREMENTS OF SECTION 313 OF TITLE III AND OF 40 CFR 372.

CHEMICAL	CAS NUMBER	CONCENTRATION % PER GALLON
Ethyl Methyl Ketone	78-93-0	100%

HAZARD CATEGORIES FOR SARA SECTION 311/312 REPORTING:

- H - 1 - Immediate (acute) Health Hazard
- P - 3 - Fire Hazard

ENVIRONMENTAL RELEASE INFORMATION:

EPA - Comprehensive Environmental Response Compensation and Liability Act. Under EPA-CERCLA ("Superfund") releases to air, land or water which exceed the reportable quantity must be reported to the National Response Center, 800-424-8802.

The reportable quantity (RQ) for a release of this product is 5,000 LBS, which is based on the presence of product.

RCRA INFORMATION:

Under EPA - RCRA (40 CFR 261.33), if methyl ethyl ketone becomes a waste material, it would be a hazardous waste, hazardous waste number U159. Refer to latest EPA or state regulations regarding proper disposal.

Under EPA - RCRA (40 CFR 261.21), if this product becomes a waste material, it would be an ignitable hazardous waste, hazardous waste number D001. Refer to latest EPA or state regulations regarding proper disposal. Under EPA - RCRA (40 CFR 261.24), a waste containing methyl ethyl ketone is hazardous (hazardous waste number D035) if it exhibits the toxicity characteristic (TC). Refer to latest EPA or state

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regulations regarding proper disposal.

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