

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

MATERIAL SAFETY DATA SHEET

#2000 BLACK INK
PAGE 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.

PRODUCT DESCRIPTION: #2000 BLACK INK

PREPARATION DATE: 3/03/97 - Rev. 3

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: Ink
CHEMICAL FAMILY: Esters/Alcohol
CAS NO.: NOT AVAILABLE (MIXTURE)
DOT HAZARDOUS MATERIALS PROPER SHIPPING NAME: Ink
DOT HAZARD CLASS: Flammable Liquid
UN/NA ID NO.: UN 1210
HMIS CODES: 3H, 3F, 0R

SECTION II - HAZARDOUS INGREDIENTS

INGREDIENT NAME	CAS NUMBER	PERCENT AGE	OCCUPATIONAL EXPOSURE LIMITS
Ethyl Acetate	141-78-6		400 PPM TWA OSHA & ACGIH
Ethanol	64-17-5		1000 PPM TWA OSHA & ACGIH
Butyl Acetate	123-86-4		150 PPM TWA OSHA & ACGIH
Manganese Compounds	N/A	<7.3	5.0 MG/M3 OSHA & ACGIH
Copper Compounds	N/A	<4.3	1.0 MG/M3 OSHA & ACGIH

SECTION III - PHYSICAL DATA

BOILING POINT, 760 MM Hg: 75 °C (167 °F)
FREEZING POINT: <-100 °C (<-148 °F)
SPECIFIC GRAVITY (H₂O=1) 0.884 @ 20/20 °C
VAPOR PRESSURE AT 20 °C: 8 MM Hg
VAPOR DENSITY(AIR=1): 3.04
EVAPORATION RATE (Butyl Acetate 1): 6.15
APPEARANCE AND ODOR: Black Liquid; Esoteric, Fruity Odor
MATERIAL V.O.C.: 6.54 LB/GL (784 G/L)

SECTION IV - FIRE AND EXPLOSION HAZARD DATA

FLASH POINT: 27 °F (-2.7 °C), Tag Closed Cup
FLAMMABLE LIMITS IN AIR, % BY VOLUME: LOWER 1.7% UPPE 11.5%
: R:

EXTINGUISHING MEDIA: Apply alcohol-type or all-purpose-type foams by manufacturer's recommended techniques for large fires. Use CO₂ or dry chemical media for small fires.

SPECIAL FIREFIGHTING PROCEDURES: Use water spray to cool fire-exposed containers and structures. Use water spray to disperse vapors; reignition is possible. Use self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS: Vapors form from this product and may travel or be moved by air currents and ignited by pilot lights, other flames, sparks, heaters, electrical equipment, static discharges or other ignition sources at locations distant from product handling point. Vapors may settle in low or confined areas, or travel a long distance to an ignition source and flash back explosively.

SECTION V - REACTIVITY DATA

STABILITY: Stable
CONDITIONS TO AVOID: NONE

PANNIER CORPORATION
MATERIAL SAFETY DATA SHEET

#2000 BLACK INK
3/03/97 - Rev. 3

PAGE 2 of 3

HAZARDOUS POLYMERIZATION: Will not occur.
INCOMPATIBILITY (MATERIALS TO AVOID): Avoid alkali metal hydroxides, such as sodium hydroxide.
DECOMPOSITION OR BYPRODUCTS: Burning can produce carbon monoxide and/or carbon dioxide. Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.

SECTION VI - HEALTH HAZARD DATA

EFFECTS OF OVEREXPOSURE

INGESTION: May cause dizziness, faintness, drowsiness, decreased awareness and responsiveness, euphoria, abdominal discomfort, nausea, vomiting, staggering gait, lack of coordination, and coma.
SKIN ABSORPTION: No adverse effects with normal skin. However, potentially harmful amounts of material may be absorbed across markedly abraded skin when contact is sustained, particularly in children.
INHALATION: May cause irritation of the nose and throat. At high concentrations, may cause narcosis, with weakness, dizziness, faintness, drowsiness, nausea, vomiting and unconsciousness.
SKIN CONTACT: Prolonged contact may result in skin cracking, causing dermatitis and secondary infections.
EYE CONTACT: May cause irritation of the conjunctiva. May possibly cause fine vacuolar lesions of the cornea.
REPEATED OVEREXPOSURE: Long-term repeated oral exposure may result in the development of progressive liver injury with fibrosis. Repeated skin contact may cause a dermatitis.
OTHER HEALTH HAZARDS: Repeated ingestion of ethanol by pregnant mothers has been shown to adversely affect the central nervous system of the fetus, producing a collection of effects which together constitute the fetal alcohol syndrome. These include mental and physical retardation, disturbances of learning, motor and language deficiencies, behavioral disorders, and small size head. Repeated exposures may aggravate liver injury produced from other causes. The skin defatting properties of this material may aggravate an existing dermatitis.
MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: None currently known.

EMERGENCY FIRST AID PROCEDURES

SWALLOWING: If conscious and a gag reflex is present, give two glasses of water and induce vomiting. If unconscious, do NOT induce vomiting. Seek the advice of a physician.
SKIN CONTACT: Wash skin with plenty of soap and water while removing contaminated clothing. Wash clothing before reuse. If skin irritation persists, call a physician.
INHALATION: Remove to fresh air. Give artificial respiration if not breathing. Oxygen may be given if necessary. If signs and symptoms of toxicity persist, call a physician.
EYES: Immediately flush eyes with water for at least 15 minutes. If irritation persists, seek medical attention, preferably an ophthalmologist.
NOTES TO PHYSICIAN: Ingestion of large quantities of this material requires gastric lavage with 4% sodium bicarbonate. Treatment of overexposure should be directed at the control of symptoms and the clinical condition.

SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: Extinguish and do NOT turn on any ignition source until area is determined to be free from explosion or fire hazards. Wear suitable protective equipment; avoid contact with liquid and vapors. Small spills could be flushed with large amounts of water. Large spills should be collected for disposal. At very low concentration in water, this material is readily biodegradable in a wastewater treatment plant. However, it has limited solubility in water; if the solubility limit is exceeded (as in a large spill), it could float on the surface. Also, a large spill could be toxic to fish. Avoid drainage of large spills to sewers or to natural waters.
WASTE DISPOSAL METHOD: Incinerate in a furnace where permitted under appropriate federal, state and local regulations.

SECTION VIII - CONTROL MEASURES

RESPIRATORY PROTECTION: Self-contained breathing apparatus in high vapor concentrations.
VENTILATION: This product should be confined within covered equipment, in which case general (mechanical) room ventilation is expected to be satisfactory. Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.
PROTECTIVE GLOVES: Butyl
EYE PROTECTION: Monogoggles
OTHER PROTECTIVE EQUIPMENT: Chemical apron, eye bath and safety shower.

SECTION IX - SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: WARNING: Flammable. Harmful if inhaled or swallowed. Causes eye irritation. Keep away from heat, sparks, and flame. Avoid breathing vapor. Avoid contact with eyes. Keep container closed. Use with adequate ventilation. Wash thoroughly after handling. For industry use only.
OTHER PRECAUTIONS: **Process Hazard:** Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "Autoignition" or "Ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

PANNIER CORPORATION
MATERIAL SAFETY DATA SHEET

#2000 BLACK INK

3/03/97 - Rev. 3

PAGE 3 of 3

Transfer Hazard: Vapors of this product may be ignited by static sparks. Use proper bonding and grounding during liquid transfer as described in National Fire Protection Association document NFPA 77.

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

Manganese Compounds

Copper Compounds

COMPREHENSIVE ENVIRONMENTAL RESPONSE, COMPENSATION, AND LIABILITY ACT OF 1980 (CERCLA) REQUIRES NOTIFICATION OF THE NATIONAL RESPONSE CENTER OF RELEASE OF QUANTITIES OF HAZARDOUS SUBSTANCES EQUAL TO OR GREATER THAN THE REPORTABLE QUANTITIES (RQs) IN 40 CFR 302.4.

Components present in this product at a level which could require reporting under the statute are:

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethyl Acetate	141-78-6	42
Butyl Acetate	123-86-4	23

CALIFORNIA PROPOSITION 65:

This product does not contain materials which the State of California has found to cause cancer, birth defects, or other reproductive harm.

MASSACHUSETTS

Right-to-Know, substance list (MSL) hazardous substances and extraordinarily hazardous substances on the MSL must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

HAZARDOUS SUBSTANCES (=>1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethyl Acetate	141-78-6	42
Ethanol	64-17-5	8
Butyl Acetate	123-86-4	23

PENNSYLVANIA

Right-to-Know, hazardous substance list hazardous substances and special hazardous substances on the list must be identified when present in products.

Components present in this product at a level which could require reporting under the statute are:

HAZARDOUS SUBSTANCES (=>1%)

CHEMICAL	CAS NUMBER	UPPER BOUND CONCENTRATION %
Ethylene Acetate	141-78-6	42
Ethanol	64-17-5	7

DISCLAIMER OF LIABILITY

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