SAFETY DATA SHEET

Product Name: 1089 Blue
General Use: Marking Ink
Colors: Blue
PANNIER P/N I1089-3111
Manufacturer/Supplier: PANNIER CORPORATION
207 SANDUSKY STREET
PITTSBURGH, PA 15212-5823 U.S.A.
24 Hr Emergency Telephone Number: Infotrac 1-800-535-5053

SECTION 1 - IDENTIFICATION

WARNING: FLAMMABLE

Risk Statements: Irritating to eyes, respiratory system, throat and skin. Repeated exposure may cause skin dryness or cracking. Vapors may cause drowsiness and dizziness. Harmful if swallowed – can cause nausea, vomiting and narcosis.

Safety Statements: Avoid contact with skin and eyes. Keep container tightly closed. Keep away from sources of ignition. No smoking!

Potential Health Effects:
Acute: Moderate irritation of eyes, nose, throat and skin. Ingestion of high concentrations may cause injury.
Chronic: Repeated excessive exposure may cause lung, liver and kidney effects.

Emergency and First Aid Procedures:
INHALATION: Remove to fresh air, restore breathing. Treat symptoms. Consult a physician.
EYES: Flush immediately with water for 15 minutes. See a physician.
SKIN: Wash with soap and water. Remove contaminated clothing. Consult a physician if irritation persists.
INGESTION: Drink water to dilute. Do not induce vomiting. Consult a physician or poison control center immediately.

SEE SECTIONS 8, 11 - The hazards are based on 100% of the contained materials. They may be reduced by their lower concentration.

SECTION 3 – COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>HAZARDOUS COMPONENTS</th>
<th>CAS NUMBER</th>
<th>WEIGHT PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENATURED ETHYL ALCOHOL</td>
<td>64-17-4</td>
<td>30</td>
</tr>
<tr>
<td>PROPYLENE GLYCOL MONOMETHYL ETHER</td>
<td>107-98-2</td>
<td>20</td>
</tr>
<tr>
<td>*DIETHYLENE GLYCOL MONOBUTYL ETHER</td>
<td>112-34-5</td>
<td>3</td>
</tr>
</tbody>
</table>

SECTION 4 – FIRST AID MEASURES

INHALATION: REMOVE TO FRESH AIR, RESTORE BREATHING. TREAT SYMPTOMS. CONSULT A PHYSICIAN.
EYES: FLUSH IMMEDIATELY WITH WATER FOR 15 MINUTES. SEE A PHYSICIAN.
SKIN: WASH WITH SOAP AND WATER. REMOVE CONTAMINATED CLOTHING. CONSULT A PHYSICIAN IF IRRITATION PERSISTS.
INGESTION: DRINK WATER TO DILUTE, DO NOT INDUCE VOMITING. CONSULT A PHYSICIAN OR POISON CONTROL CENTER IMMEDIATELY.

SECTION 5 – FIRE AND EXPLOSION HAZARD DATA

EXTINGUISHING MEDIA: ALCOHOL FOAM, CO2, DRY CHEMICAL, WATER FOG
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SPECIAL FIREFIGHTING PROCEDURES: WATER MAY BE USED TO COOL CLOSED CONTAINERS TO PREVENT EXPLOSION WHEN EXPOSED TO EXTREME HEAT. FULL PROTECTIVE EQUIPMENT MAY BE NEEDED TO PROTECT FIREFIGHTERS FROM HAZARDOUS COMBUSTION PRODUCTS.

UNUSUAL FIRE AND EXPLOSION HAZARDS: CLOSED CONTAINERS MAY EXPLODE OR COLLAPSE WHEN EXPOSED TO EXTREME HEAT. DURING EMERGENCY CONDITIONS, OVEREXPOSURE TO DECOMPOSITION PRODUCTS MAY CAUSE A HEALTH HAZARD.

SECTION 6 – ACCIDENTAL RELEASE MEASURES

STEPS TO TAKE IN CASE MATERIAL IS RELEASED OR SPILLED: ELIMINATE ALL SOURCES OF VAPOR IGNITION. VENTILATE AREA. AVOID BREATHING VAPORS. REMOVE BY SUITABLE INERT ABSORBING MATERIAL.

SECTION 7 – HANDLING & STORAGE

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING: KEEP CONTAINERS CLOSED WHEN NOT IN USE, AND KEEP AWAY FROM HEAT, SPARKS AND OPEN FLAME. AVOID EXCESSIVE INHALATION OF VAPOR OR MIST.

OTHER PRECAUTIONS
IN ACCORDANCE WITH GOOD INDUSTRIAL PRACTICE, HANDLE WITH CARE AND AVOID UNNECESSARY CONTACT. USE ONLY WITH ADEQUATE VENTILATION. WASH THOROUGHLY AFTER HANDLING. FOR INDUSTRIAL USE ONLY. HMIS PERSONAL PROTECTIVE EQUIPMENT IS DEPENDENT UPON CONDITIONS OF USE.

SECTION 8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

HAZARDOUS COMPONENTS OCCUPATIONAL EXPOSURE LIMITS

<table>
<thead>
<tr>
<th>HAZARDOUS COMPONENTS</th>
<th>OSHA PEL</th>
<th>ACGIH TLV</th>
</tr>
</thead>
<tbody>
<tr>
<td>DENATURED ETHYL ALCOHOL</td>
<td>1000 PPM</td>
<td>1000 PPM</td>
</tr>
<tr>
<td>PROPYLENE GLYCOL MONOMETHYL ETHER</td>
<td>N/A</td>
<td>100 PPM</td>
</tr>
<tr>
<td>*DIETHYLENE GLYCOL MONOBUTYLYL ETHER</td>
<td>N/A</td>
<td>N/A</td>
</tr>
</tbody>
</table>

CONTROL MEASURES: GENERAL VENTILATION SHOULD BE SUFFICIENT FOR MOST CONDITIONS.


PROTECTIVE CLOTHING: USE OF RUBBER OR PLASTIC GLOVES RECOMMENDED FOR PROLONGED OR REPEATED CONTACT.

OTHER PROTECTIVE CLOTHING OR EQUIPMENT: USE PROTECTIVE CREAM WHEN SKIN CONTACT IS LIKELY.

EYE PROTECTION: SAFETY EYEWEAR SHOULD BE AVAILABLE TO AVOID ACCIDENTAL CONTACT.

WORK / HYGIENIC PRACTICES: WASH HANDS BEFORE EATING, DRINKING OR SMOKING. NO SMOKING IN WORK AREA.

SECTION 9 – PHYSICAL / CHEMICAL PROPERTIES

BOILING POINT: 165 to 446° F. SPECIFIC GRAVITY (H2O=1): 1.13
VAPOR DENSITY: HEAVIER THAN EVAPORATION RATE: SLOWER THAN ETHER AIR
MATERIAL V. O. C.: 4.58 LB/GL (549 G/L) VAPOR PRESSURE: 44 mm Hg @ 77° F
SOLUBILITY IN WATER: INSOLUBLE
APPEARANCE AND ODOR: THIN COLORED LIQUID, ALCOHOLIC
FLASH POINT: 54° F METHOD USED: CLOSED CUP
FLAMMABLE LIMITS IN AIR BY VOLUME - LOWER: 0.9% UPPER: 19.0%

SECTION 10 – STABILITY AND REACTIVITY

STABILITY: STABLE
CONDITIONS TO AVOID: HEAT, SPARKS AND OPEN FLAME.

INCOMPATABILITY (MATERIALS TO AVOID) 
CONTACT WITH STRONG ACIDS, ALKALIES OR OXIDIZERS

HAZARDOUS DECOMPOSITION OR BYPRODUCTS 
MAY PRODUCE CARBON MONOZIDE, CARBON DIOXIDE, OXIDES OF NOTROGEN, AND OTHER HAZARDOUS DECOMPOSITION PRODUCTS.

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION 11 – TOXICOLOGICAL INFORMATION

INDIVIDUAL INGREDIENT HAZARDS
*DIETHYLENE GLYCOL MONOBUTYL ETHER - INGESTION: LD50, 6,560 MG/KG – RAT. SKIN ABSORPTION: LD50, 4,120 MG/KG – RABBIT. INHALATION: N/A.

CARCINOGENICITY: NTP? NO? IARC MONOGRAPHIS? NO OSHA REGULATED? NO
NONE CURRENTLY KNOWN.

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE
RESPIRATORY IRRITATION, DERMITITIS AND NAUSEA.

SECTION 12 – ECOLOGICAL INFORMATION

NDA

SECTION 13 – DISPOSAL INFORMATION

WASTE DISPOSAL METHOD: INCINERATION IS PREFERRED, IN COMPLIANCE WITH LOCAL, STATE AND FEDERAL REGULATIONS. REFER TO SDS CAUTION INFORMATION BEFORE ATEMPTING CLEANUP.

SECTION 14 – TRANSPORTATION INFORMATION

DOT PROPER SHIPPING NAME: PRINTING INK
PACKING GROUP: II
DOT HAZARD CLASS: 3
DOT UN/NA NUMBER: UN 1210
HAZARD SUBCLASS: N/A
EMERGENCY RESPONSE GUIDE NO. 26

THE LISTED TRANSPORTATION INFORMATION APPLIES ONLY TO GROUND TRANSPORT AND DOES NOT ADDRESS REGULATORY VARIATIONS DUE TO CHANGES IN PACKAGE SIZE, MODE OF SHIPMENT, OR OTHER REGULATORY DESCRIPTORS.

SECTION 15 – REGULATORY INFORMATION

TOXIC SUBSTANCES CONTROL ACT: ALL OF THE INGREDIENTS ARE LISTED IN THE TSCA INVENTORY.
SARA 313: *CHEMICALS SUBJECT TO REPORTING REQUIREMENTS OF SEC. 313, ETC.

SECTION 16 –OTHER INFORMATION

DISCLAIMER
THE INFORMATION AND RECOMMENDATIONS CONTAINED HEREIN WERE OBTAINED FROM SOURCES BELIEVED TO BE GENERALLY RELIABLE, BUT, WE MAKE NO WARRANTY CONCERNING THEIR ACCURACY OR SUFFICIENCY, AND WE WILL NOT BE HELD LIABLE FOR CLAIMS RELATING TO ANY PARTY’S USE OF OR RELIANCE ON INFORMATION OR RECOMMENDATIONS CONTAINED HEREIN.

DATE: 01/01/15
HMIS CODES: H – 2, F – 3, R – 0, P -
LEGEND: NDA – NO DATA AVAILABLE N/D - NOT DETERMINED N/E – NOT ESTABLISHED