THE KINDT-COLLINS CO.  
12651 Elmwood Ave. • Cleveland, Ohio 44111

09/13/91

MATERIAL SAFETY DATA SHEET

MASTER Celastic Solvent

SECTION I - IDENTIFICATION

EMERGENCY TELEPHONE NO.
(216) 252-4122

Transportation Emergencies: Call CHEMTREC
(800) 424-9300 Continental U.S.

Health Emergencies: Call Your Local Poison
Information Center

PRODUCT NAME & CAS NUMBER  MASTER Celastic Solvent  78-93-3

SYNONYMS: 2-BUTANONE; MEK; ETHYL METHYL KETONE;
METHYL ACETONE

HAZARD RANKING: 0 = LEAST
1 = SLIGHT
2 = MODERATE
3 = HIGH
4 = EXTREME

NFPA HAZARD CLASS:
Health Hazard = 2
Flammability = 3
Reactivity = 0
Other = -

HMIS HAZARD CLASS:
Health = 1
Flammability = 3
Reactivity = 0
P.P.E. = SG

TRADE NAME: MASTER Celastic Solvent
CHEMICAL FAMILY: KETONE
CHEMICAL NAME/FORMULA: METHYL ETHYL KETONE  CH₃COCH₂CH₃
MATERIAL SAFETY DATA SHEET

 SECTION II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>HAZARDOUS COMPONENTS</th>
<th>HAZARDOUS %</th>
<th>TLV (Units)</th>
<th>PROD. CAS #</th>
</tr>
</thead>
<tbody>
<tr>
<td>METHYL ETHYL KETONE</td>
<td>100%</td>
<td>200 PPM</td>
<td>78-93-3</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8-HR TWA</td>
<td>OSHA</td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 PPM</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>8-HR TWA</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>300 PPM</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>15-MIN STEL</td>
<td>ACGIH TLV</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3000 PPM</td>
<td></td>
</tr>
</tbody>
</table>

IMMEDIATELY DANGEROUS TO LIFE & HEALTH LEVEL

 SECTION III - PHYSICAL DATA

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>APPROPRIATE BOILING POINT</td>
<td>79.6°C (175°F) (760 mm Hg)</td>
</tr>
<tr>
<td>FREEZING POINT</td>
<td>-88.7°C (-124°F)</td>
</tr>
<tr>
<td>VOLATILITY/VOL(%),</td>
<td>100%</td>
</tr>
<tr>
<td>MELTING POINT</td>
<td>-123.34°F</td>
</tr>
<tr>
<td>VAPOR PRESSURE (mm Hg)</td>
<td>77.5 mm Hg @ 20°C</td>
</tr>
<tr>
<td>VAPOR DENSITY (Air=1)</td>
<td>2.5 @ 20°C</td>
</tr>
<tr>
<td>SOLUBILITY IN H2O</td>
<td>26.8% BY WT @ 20°C</td>
</tr>
<tr>
<td>APPEARANCE/ODOR</td>
<td>APPEARANCE: CLEAR, COLORLESS, MOBILE LIQUID</td>
</tr>
<tr>
<td>ODOR</td>
<td>PUNGENT CHARACTERISTIC &quot;KETONE&quot; ODOR</td>
</tr>
<tr>
<td>SPECIFIC GRAVITY (H2O=1)</td>
<td>0.8062 @ 20/20°C</td>
</tr>
<tr>
<td>MOLECULAR WEIGHT</td>
<td>72</td>
</tr>
<tr>
<td>WEIGHT PER GALLON</td>
<td>6.71 LBS</td>
</tr>
<tr>
<td>EVAPORATION RATE</td>
<td>5.7 (BUTYL ACETATE = 1)</td>
</tr>
<tr>
<td>PH</td>
<td>N/A</td>
</tr>
</tbody>
</table>

 SECTION IV - FIRE AND EXPLOSION HAZARD DATA

<table>
<thead>
<tr>
<th>PROPERTY</th>
<th>VALUE</th>
</tr>
</thead>
<tbody>
<tr>
<td>FLASH POINT</td>
<td>30°F (1°C), TAG OPEN CUP (ASTM D1310)</td>
</tr>
<tr>
<td>LOWER EXPLOSIVE LIMIT</td>
<td>2.0% BY VOLUME IN AIR</td>
</tr>
<tr>
<td>UPPER EXPLOSIVE LIMIT</td>
<td>11.0% BY VOLUME IN AIR</td>
</tr>
<tr>
<td>EXTINGUISH MEDIA</td>
<td>water spray may be useful in minimizing vapors and cooling containers exposed to heat and flame. Alcohol-type or universal-type foams applied by manufacturers' recommended techniques for large fires. Carbon dioxide or dry chemical for small fires.</td>
</tr>
</tbody>
</table>
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FIRE & EXPLOSION HAZARDS: This material is extremely flammable and may be ignited by heat, sparks, flame or static electricity. Vapors are heavier than air and may settle in low places or travel along the ground a long distance to an ignition source and flash back. Material reates a special hazard because it floats on water.

FIRE FIGHTING PROCEDURES: The use of a SCBA is recommended for fire fighters. Water spray may be useful in minimizing vapors and cooling containers exposed to heat and flame. Minimize breathing gases, vapor, fumes or decomposition products. Use supplied-air breathing equipment for enclosed or confined spaces or as otherwise needed.

SECTION V - HEALTH HAZARDS

EMERGENCY............. ****EMERGENCY**
CALL YOUR LOCAL POISON INFORMATION CENTER

PRIMARY ROUTES OF ENTRY/OVEREXPOSURE EFFECTS..............

EYE CONTACT: May cause eye injury which may persist for several days. Liquid and vapor in high concentrations, causes irritation, tearing and burning sensation.

SKIN CONTACT: This product may cause skin irritation. Prolonged or repeated exposure to this material may cause redness and burning, drying and cracking of the skin and dermatitis. Persons with pre-existing skin disorders may be more susceptible to the effects of this material.

INHALATION (BREATHING): Inhalation of excessive concentrations of vapors or mists may cause: Irritation of the nose and throat. Signs of nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue). may cause headaches and dizziness, are anesthetic, and may have other central nervous system effects.

INGESTION (SWALLOWING): Ingestion of excessive quantities may cause: Irritation of the digestive tract, signs of nervous system depression (e.g., drowsiness, dizziness, loss of coordination, and fatigue). Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchiopneumonia or pulmonary edema.
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FIRST AID PROCEDURES..... EYE CONTACT: For direct contact, flush the affected eye(s) with clean water for 15 minutes or until irritation subsides. Object is to flush material out holding lids apart to ensure flushing of the entire eye surface then SEEK IMMEDIATE MEDICAL ATTENTION.

SKIN CONTACT: Remove contaminated clothing. Cleanse affected area(s) thoroughly by washing with mild soap and water.

INHALATION (BREATHING): Move victim away from source of exposure and into fresh air. If victim is not breathing, artificial respiration should be administered by qualified personnel. If breathing difficulties develop, oxygen should be administered by qualified personnel.

INGESTION (SWALLOWING): ASPIRATION HAZARD: Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage.

============================================= SECTION VI – REACTIVITY DATA

CHEMICAL STABILITY..... This product is stable.
CONDITIONS TO AVOID..... Heat, sparks, flame and all other ignition sources.
INCOMPATIBLE MATERIALS... Caustic soda and other strong alkalis; hydrochloric, sulfuric and other strong inorganic acids; amines; oxidizing agents such as hydrogen peroxide, nitric acid, perchloric acid or chromium trioxide.

DECOMPOSITION PRODUCTS... Burning can produce carbon monoxide and/or carbon dioxide.
HAZARDOUS POLYMERIZATION. Will not occur.
POLYMERIZATION AVOID..... NONE
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SECTION VII - SPILL OR LEAK PROCEDURE

PRECAUTIONS IN CASE OF HIGHWAY OR RAILWAY SPILLS
RELEASE OR SPILL........ Call CHEMTREC (800) 424-9300 Continental U.S.

Keep all sources of ignition and hot metal surfaces away from spill. If spill is indoors, ventilate area of spill. If spill in excess of EPA reportable quantity is made into the environment, immediately notify the National Response Center (Phone Number: 800-424-8802). Avoid eye or skin contact. Place leaking containers in well-ventilated area. If fire potential exists, blanket spill with foam or use water spray to disperse vapors. Contain spill to minimize contaminated area and facilitate salvage or disposal. To clean up spill, flush area sparingly with water or use an absorbent.

WASTE DISPOSAL METHOD..... Dispose of product in accordance with Local, County, State, and Federal regulations.

SECTION VIII - SPECIAL PROTECTION

RESPIRATORY PROTECTION... Use self-contained breathing equipment in high concentrations. (SCBA)

VENTILATION.............. This product should be confined within closed equipment, in which case general (mechanical) room ventilation should be satisfactory. Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

PROTECTIVE GLOVES........ The use of gloves impermeable to the specific material handled is advised to prevent skin contact and possible irritation. Butyl, neoprene or rubber has been recommended.

EYE PROTECTION............ Use splash goggles or face shield when eye contact may occur.

OTHER PROTECTIVE EQUIPMENT...... It is suggested that a source of clean water be available in work area for flushing eyes and skin. Impervious clothing should be worn as needed.
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HANDLING AND STORAGE
PRECAUTIONS: Keep containers tightly closed. Use and store this product with adequate ventilation. Avoid inhalation of vapors and personal contact with the product. Keep containers cool, dry, and away from sources of ignition. "Empty" containers retain residue (liquid and/or vapor) and can be dangerous. Do not store near heat, sparks, flame or strong oxidants. Cleanse skin thoroughly after contact, before breaks and meals, and at end of work period. Product is readily removed from skin by waterless hand cleaners followed by washing thoroughly with soap and water. Discard contaminated leather clothing.

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SECTION IX - SPECIAL PRECAUTIONS
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HAZARD CLASS........... FLAMMABLE LIQUID
DOT SHIPPING NAME....... METHYL ETHYL KETONE
REPORTABLE QUANTITY (RQ). 5000 POUNDS (KILOGRAMS)
DOT NUMBER............. UN 1193

PACKAGING SIZE........... VARIOUS

FOOT NOTES ............. NONE

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