

MATERIAL SAFETY DATA SHEET

E-Z METHYL ETHYL KETONE

EMERGENCY CONTACT: FOR CHEMICAL EMERGENCY - SPILL, LEAK, FIRE, EXPOSURE, OR ACCIDENT,
CALL CHEMTREC AT 1-(800)-424-9300, DAY OR NIGHT.

<u>INDEX</u>		<u>HMIS</u>		<u>NFPA</u>	
4 - Severe	Health	1	Health	1	
3 - Serious	Flammability	3	Flammability	3	
2 - Moderate	Physical Hazard	0	Reactivity	0	
1 - Slight					
0 - Insignificant					

Section 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>INGREDIENT(S)</u>	<u>CAS Number</u>	<u>% (by weight)</u>
Methyl Ethyl Ketone	78-93-3	100.0

Section 3. HAZARDS IDENTIFICATION

POTENTIAL HEALTH EFFECTS

EYE:

Can cause eye irritation. Symptoms include stinging, tearing, redness and swelling of eyes.

SKIN:

Can cause skin irritation. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, burns and other skin damage. Passage of this material into the body through the skin is possible, but it is unlikely that this would result in harmful effects during safe handling and use.

SWALLOWING:

Swallowing small amounts of this material during normal handling is not likely to cause harmful effects. Swallowing large amounts may be harmful. This material can get into the lungs during swallowing or vomiting. This results in lung inflammation and other lung injury.

INHALATION:

Breathing of vapor or mist is possible. Breathing small amounts of this material during normal handling is not likely to cause harmful effects. Breathing large amounts may be harmful. Symptoms usually occur at air concentrations higher than the recommended exposure limits (See Section 8).

SYMPTOMS OF EXPOSURE:

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness).

TARGET ORGAN EFFECTS:

Based on animal studies, exposure to methyl ethyl ketone (MEK) increases the onset of peripheral neuropathy caused by exposure to methyl butyl ketone (MBK), and/or n-hexane, and/or ethyl butyl ketone. MEK alone has not been shown to cause peripheral neuropathy. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals: mild, reversible liver effects, mild, reversible kidney effects.

DEVELOPMENTAL INFORMATION:

This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. Harm to the fetus occurs only at exposure levels that harm the pregnant animal. The relevance of these findings to humans is uncertain.

CANCER INFORMATION:

Based on the available information, this material cannot be classified with regard to carcinogenicity. This material is not listed as a carcinogen by the International Agency for Research on Cancer, the National

Toxicology Program or the Occupational Safety and Health Administration.

OTHER HEALTH EFFECTS:

No data

PRIMARY ROUTE(S) OF ENTRY:

Inhalation, skin absorption, skin contact, eye contact, ingestion.

Section 4. FIRST AID MEASURES

EYES:

If symptoms develop, immediately move individual away from exposure and into fresh air. Flush eyes gently with water for at least 15 minutes while holding eyelids apart; seek immediate medical attention.

SKIN:

Remove contaminated clothing. Flush exposed area with large amounts of water. If skin is damaged, seek immediate medical attention. If skin is not damaged and symptoms persist, seek medical attention. Launder clothing before reuse.

SWALLOWING:

Seek medical attention. If individual is drowsy or unconscious, do not give anything by mouth; place individual on the left side with the head down. Contact a physician, medical facility, or poison control center for advice about whether to induce vomiting. If possible, do not leave individual unattended.

INHALATION:

If symptoms develop, move individual away from exposure and into fresh air. If symptoms persist, seek medical attention. If breathing is difficult, administer oxygen. Keep person warm and quiet; seek immediate medical attention.

NOTE TO PHYSICIANS

This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 3 - Swallowing) when deciding whether to induce vomiting. Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions).

Section 5. FIRE FIGHTING MEASURES

FLASH POINT:

23.0 F (-5.0 C) TCC

EXPLOSIVE LIMIT:

(for product) Lower 2.0% Upper 11.5%

AUTOIGNITION TEMPERATURE:

759.0 F (403.8 C)

HAZARDOUS PRODUCTS OF COMBUSTION:

May form: carbon dioxide and carbon monoxide.

FIRE AND EXPLOSION HAZARDS:

Vapors are heavier than air and may travel along the ground or may be moved by ventilation and ignited by pilot lights, other flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations distant from material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively.

EXTINGUISHING MEDIA:

Regular foam, carbon dioxide, dry chemical.

FIRE FIGHTING INSTRUCTIONS:

Wear a self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment. Refer to the personal protective equipment section of this MSDS.

Section 6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL:

Absorb liquid on vermiculite, floor absorbent or other absorbent material.

LARGE SPILL:

Eliminate all ignition sources (flares, flames including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Prevent from entering drains, sewers, streams or other bodies of water. Prevent from spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer spilled product to clean containers for recovery. Absorb unrecoverable product. Transfer contaminated

absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If run-off occurs, notify proper authorities as required, that a spill has occurred.

Section 7. HANDLING AND STORAGE

HANDLING:

Containers of this material may be hazardous when emptied. Since emptied containers retain product residues (vapor, liquid and/or solid), all hazard precautions given in the data sheet must be observed. All five - gallon pails and larger metal containers, including tank cars and tank trucks, should be grounded and/or bonded when material is transferred. **WARNING.** 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.

Section 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

EYE PROTECTION:

Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other type safety glasses. Consult your safety representative.

SKIN PROTECTION:

Wear resistant gloves (consult your safety equipment supplier). To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

RESPIRATORY PROTECTIONS:

If workplace exposure limit(s) of product or any component is exceeded (see exposure guidelines), a NIOSH/MSHA approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH/MSHA respirators (negative pressure type) under specified conditions (see your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

ENGINEERING CONTROLS:

Provide sufficient mechanical (general and/or local exhaust) ventilation to maintain exposure below TLV(s).

EXPOSURE GUIDELINES:

COMPONENT

Methyl Ethyl Ketone (78-93-3)
OSHA PEL 200.000 ppm - TWA
OSHA VPEL 200.000 ppm - TWA
OSHA VPEL 300.000 ppm - STEL
ACGIH TLV 200.000 ppm - TWA
ACGIH TLV 300.000 ppm - STEL

Section 9. PHYSICAL AND CHEMICAL PROPERTIES

BOILING POINT: (for product) 175.0 F (79.4 C) @ 760 mmHg

VAPOR PRESSURE: (for product) 78.000 mmHg @ 68.00 F

SPECIFIC VAPOR DENSITY: 2.500 @ AIR = 1

SPECIFIC GRAVITY: .806 @ 68.00 F

LIQUID DENSITY: 6.710 lbs/gal. @ 68.00 F .806 kg/l @ 20.00 C

PERCENT VOLATILES: 100.0%

VOLATILE ORGANIC COMPOUNDS (VOC): 100.000%
807.000 g/l
6.710 lbs/gal

EVAPORATION RATE: 5.70 (N-BUTYL ACETATE)

APPEARANCE: Clear, colorless, mobile liquid

STATE: Liquid

PHYSICAL FORM: Neat

COLOR: Clear, apha color 10 max

ODOR: Strong characteristic "Ketone"

pH: No data

VISCOSITY: .4 cps

FREEZING POINT: -123.0 F (-86.1 C)

MOLECULAR WEIGHT: 72.0

SOLUBILITY IN WATER: 26.8% @ 20.0 C

OCTANOL/WATER PARTITION COEFFICIENT: 1.720

BULK DENSITY: .900 lbs/ft 3

10. STABILITY AND REACTIVITY

HAZARDOUS POLYMERIZATION:

Product will not undergo hazardous polymerization.

HAZARDOUS DECOMPOSITION:

May form: carbon dioxide and carbon monoxide.

CHEMICAL STABILITY:

Stable.

INCOMPATIBILITY:

Avoid contact with: copper, copper alloys, strong alkalis, strong oxidizing agents.

11. TOXICOLOGICAL INFORMATION

No data

12. ECOLOGICAL INFORMATION

No data

13. DISPOSAL CONSIDERATION

WASTE MANAGEMENT INFORMATION:

Destroy by incineration in accordance with applicable regulations.

14. TRANSPORT INFORMATION

DOT INFORMATION - 49 CFR 172.101

DOT Description & [Container Mode]:

Methyl Ethyl Ketone, 3, UN1193, II

[55 Gal. Drum/5 Gal. Pail/Gallon]

DOT Description & [Container Mode]:

Consumer Commodity, ORM-D

[Quart]

NOS Component:

None

RQ (REPORTABLE QUANTITY) - 49 CFR 172.101

Product Quantity (lbs.)

5000

Component

Ethyl Methyl Ketone

OTHER TRANSPORTATION INFORMATION

The DOT Transport Information may vary with the container and mode of shipment.

15. REGULATORY INFORMATION

US FEDERAL REGULATIONS

TSCA (TOXIC SUBSTANCES CONTROL ACT) STATUS

TSCA (UNITED STATES) The intentional ingredients of this product are listed.

CERCLA RQ - 40 CFR 302.4 (a)

<u>Component</u>	<u>RQ (lbs.)</u>
Methyl Ethyl Ketone	5000

SARA 302 COMPONENTS - 40 CFR 355 Appendix A

None

SECTION 311/312 HAZARD CLASS - 40 CFR 370.2

Immediate (X) Delayed () Fire (X) Reactive ()

Sudden Release of Pressure ()

SARA 313 Components - 40 CFR 372.65

<u>Section 313 Component(s)</u>	<u>CAS Number</u>	<u>%</u>
Methyl Ethyl Ketone	78-93-3	100.00

OSHA Process Safety Management 29 CFR 1910

None Listed

EPA Accidental Release Prevention 40 CFR 68

None Listed

INTERNATIONAL REGULATIONS

INVENTORY STATUS

AICS (AUSTRALIA) The intentional ingredients of this product are listed.

DSL (CANADA) The intentional ingredients of this product are listed.

ECL (SOUTH KOREA) The intentional ingredients of this product are listed.

EINECS (EUROPE) The intentional ingredients of this product are listed.

ENCS (JAPAN) The intentional ingredients of this product are listed.

IECSC (CHINA) The intentional ingredients of this product are listed.

PICCS (PHILIPPINES) The intentional ingredients of this product are listed.

SWISS (SWITZERLAND) The intentional ingredients of this product are listed.

STATE AND LOCAL REGULATIONS

CALIFORNIA PROPOSITION 65

None

NEW JERSEY RTK LABEL INFORMATION

Methyl Ethyl Ketone 78-93-3

PENNSYLVANIA RTK LABEL INFORMATION

2-Butanone 78-93-3

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