

3. Hazards Identification

3.1 Emergency Overview

Appearance

Water-White liquid

Odor

Ketone

WARNING!

FLAMMABLE LIQUID AND VAPOR

Causes eye irritation.

Overexposure may cause central nervous system depression. May cause irritation of nose, throat and lungs if allowed to become airborne.

- **HMIS Rating**

HEALTH = 2 (moderate)

FLAMMABILITY = 3 (serious)

REACTIVITY = 0 (minimal)

CHRONIC = *

3.2 Potential Health Effects

- **Immediate Hazards**

INGESTION: No hazards known to company.

INHALATION: Not expected to be harmful under normal conditions of use. However, overexposure may cause central nervous system depression. Also, if allowed to become airborne, may cause irritation of nose, throat and lungs.

SKIN: May cause irritation on prolonged or repeated contact.

EYES: Causes irritation.

Methyl Ethyl Ketone 78-93-3

Can cause central nervous system depression. Signs and symptoms may include headache, dizziness, nausea, vomiting, unconsciousness and

asphyxiation. Reports have associated repeated and prolonged occupational overexposure to solvents with permanent brain and nervous system damage. Intentional misuse by deliberately concentrating and inhaling the contents may lead to addiction and may be harmful or fatal.

• Delayed Hazards

Methyl Ethyl Ketone 78-93-3

Suspect reproductive hazard. May cause reproductive disorders based on animal data.

Methyl ethyl ketone may potentiate (shorten the time of onset) peripheral neuropathy caused by methyl n-butyl ketone or n-hexane. Methyl ethyl ketone by itself has not been shown to cause peripheral neuropathy.

-- See Footnote C.

Footnote C: As of the date of issuance of this document, this material has not been listed by NTP, classified by IARC nor regulated by OSHA as a carcinogen.

4. First Aid Measures

INGESTION: If accidentally swallowed, dilute by drinking large quantities of water. Immediately contact poison control center or hospital emergency room for any other additional treatment directions.

INHALATION: Remove to fresh air.

SKIN: In case of irritation, flush with water.

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held apart during irrigation to insure water contact with entire surface of eyes and lids. Call a physician.

5. Fire Fighting Measures

Autoignition Temperature	Not available
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	10/1.7

Flash Point

-6 deg C

FLAMMABLE LIQUID AND VAPOR.

Keep liquid and vapor away from heat, sparks, flame and other ignition sources including, but not limited to, pilot lights, heaters, cigarettes, electric motors and static discharge. Vapor is heavier than air and may settle in low places or travel outward to a source of ignition and flashback.

In case of fire, use water spray, dry chemical, foam or CO2. Use water to keep fire-exposed containers cool.

6. Accidental Release Measures

Eliminate all ignition sources. Soak up with absorbent material and remove to a chemical disposal area. Prevent entry into natural bodies of water.

7. Handling and Storage

7.1 Handling

Handle in accordance with good industrial hygiene and safety practices. These practices include avoiding unnecessary exposure and removal of the material from eyes, skin and clothing.

Wash thoroughly after handling. Always use appropriate Personal Protective Equipment (PPE).

INHALATION: Avoid prolonged or repeated breathing of vapor.

SKIN: Persons with sensitive skin should avoid prolonged, continuous contact with skin. If irritation develops, discontinue use.

EYES: Avoid contact with eyes.

7.2 Storage

Keep containers tightly closed.

Keep away from heat, sparks, flame and other ignition sources.

8. Exposure Controls/Personal Protection

8.1 Exposure Controls

ENGINEERING CONTROLS: The following exposure control techniques may be used to effectively minimize employee exposure: local exhaust ventilation, enclosed system design, process isolation and remote control in combination with appropriate use of personal protective equipment and prudent work practices. These techniques may not necessarily address all issues pertaining to your operations. We, therefore, recommend that you consult with experts of your choice to determine whether or not your programs are adequate. If airborne contaminants are generated when the material is heated or handled, sufficient ventilation in volume and air flow patterns should be provided to keep air contaminant concentration levels below acceptable criteria.

8.2 Personal Protection

Where air contaminants can exceed acceptable criteria, use NIOSH/MSHA approved respiratory protection equipment. Respirators should be selected based on the form and concentration of contaminants in air in accordance with OSHA laws and regulations or other applicable standards or guidelines, including ANSI standards regarding respiratory protection. Use goggles if contact is likely. Wear impervious gloves as required to prevent skin contact.

8.3 Exposure Guidelines

Methyl Ethyl Ketone 78-93-3
ACGIH TLV: 200 ppm (590 mg/m³) TWA; 300 ppm (885 mg/m³) STEL
OSHA PEL: 200 ppm (590 mg/m³) TWA
REMANDED PEL: 200 ppm (590 mg/m³) TWA; 300 ppm (885 mg/m³) STEL
OSHA 1989 PEL remanded, but in effect in some states

9. Physical and Chemical Properties

Percent Volatiles	70
pH @ 25 C	Not available
Specific Gravity	0.87
Appearance	Water-White liquid
Autoignition Temperature	Not available
Boiling Point	79 deg C
Vapor Density (Air=1)	> 1
Vapor Pressure, mm Hg @ 20 C	71
Evaporation Rate (Butyl Acetate=1)	> 1
Upper/Lower Flammable Limits	Not available
Up/Lower Explosive Limits, % by Vol	10/1.7
Flash Point	-6 deg C
Freezing Point	Not available
Odor	Ketone
Odor Threshold, ppm	Not available
Solubility in Water	Negligible
Coefficient of Water/Oil Distrib.	Not available

10. Stability and Reactivity

Normally stable as defined in NFPA 704-12(4-3.1).

- **Incompatibilities:**

Oxidizers, alkaline materials.

- **Decomposition products may include:**

CO, CO₂.

- **Hazardous polymerization:**

Will not occur.

• **Other Hazards:**

None known to company.

11. Toxicological Information

INGESTION: Not toxic orally when tested as described in 16 CFR Part 1500.3 (c)(1) and (2).
INHALATION: Not toxic by inhalation when tested as described in 16 CFR Part 1500.3 (c)(1) and (2).
SKIN ABSORPTION: Not toxic dermally when tested as described in 16 CFR Part 1500.3 (c)(1) and (2).
SKIN: Not a primary irritant (primary skin irritation index less than 5.0/8.0) when tested as described in 16 CFR Part 1500.41.
EYES: Moderately irritating when tested as described in 16 CFR Part 1500.42.
Methyl Ethyl Ketone 78-93-3
LC50: Not available
LD50: orl-rat=6.86 ml/kg (Merck)

12. Ecological Information

Not determined.

13. Disposal Considerations

Recover free liquid. Absorb residue and dispose of according to local, state/provincial, and federal requirements.
Empty container: May contain explosive vapors. DO NOT cut, puncture or weld on or nearby.

14. Transport Information

14.1 U.S. Department of Transportation (DOT)

The data provided in this section is for information only and may not be specific to your package size. You will need to apply the appropriate regulations to properly classify your shipment for transportation.

ORM-D Consumer Commodity.

14.2 Canadian Transportation of Dangerous Goods (TDG)

Not determined.

15. Regulatory Information (Selected Regulations)

15.1 U.S. Federal Regulations

- **OSHA Hazard Communication Standard 29CFR1910.1200**

This material is a "health hazard" and/or a "physical hazard" as determined when reviewed according to the requirements of the Occupational Safety and Health Administration 29 CFR Part 1910.1200 "Hazard Communication" Standard.

- **SARA Title III: Section 311/312**

Fire hazard
Immediate health hazard
Delayed health hazard

- **SARA Title III Section 313 and 40 CFR Part 372**

This product contains the following toxic chemical(s) subject to the reporting requirements of Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986, and Subpart C-Supplier Notification Requirement of 40 CFR Part 372.

Methyl Ethyl Ketone

78-93-3

70.00%

- **TSCA Section 8(b) Inventory**

All reportable chemical substances are listed on the TSCA Inventory. We rely on certifications of compliance from our suppliers for chemical substances not manufactured by us.

15.2 Canadian Regulations

- **Workplace Hazardous Materials Information System (WHMIS)**

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulation (CPR) and the MSDS contains all the information required by the CPR.

CLASS D, DIV 2B

CLASS B, DIV 2

- **Canadian Environmental Protection Act (CEPA)**

All reportable chemical substances are listed on the Domestic Substances List (DSL) or otherwise comply with CEPA new substance notification requirements.

- **National Pollutant Release Inventory (NPRI)**

This product contains the following chemical(s) subject to the reporting requirements of the Canadian Environmental Protection Act (CEPA) subsection 16(1), National Pollutant Release Inventory.

Methyl ethyl ketone

78-93-3

70.00%

16. Other Information

HL (Cautions Required): Products bearing the HL Health Label (Cautions Required) Seal of The Art & Creative Materials Institute, Inc. (ACMI) are certified to be properly labeled in a program of toxicological evaluation by a medical expert. This program is reviewed by ACMI's Toxicological Advisory Board. These products are certified by ACMI to be labeled in accordance with the chronic hazard labeling standard, ASTM D-4236 and Federal Law, P.L. 100-695.

- **User's Responsibility**

The OSHA Hazard Communication Standard 29CFR 1910.1200 and the Workplace

Hazardous Materials Information System (WHMIS) require that the information

contained on these sheets be made available to your workers. Educate and

train your workers regarding OSHA and WHMIS precautions. Instruct your workers to handle this product properly. Consult with appropriate experts

to guard against hazards associated with use of this product and its ingredients.

- **Disclaimer**

SELLER MAKES NO WARRANTY, EXPRESS OR IMPLIED, CONCERNING THE PRODUCT OR THE

MERCHANTABILITY OR FITNESS THEREOF FOR ANY PURPOSE, except that the

product

shall conform to contracted specifications, and that the product does not

infringe any valid United States or Canadian patent. No claim of any kind

shall be greater in amount than the purchase price of the quantity of product in respect of which damages are claimed. In no event shall Seller

be liable for incidental or consequential damages, whether Buyer's claim is

based on contract, breach of warranty, negligence or otherwise.

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