

**Material Safety Data Sheet (Methyl Ethyl Ketone)**

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**Product Identification**

Chemical family: Ketones.  
Product name: Methyl Ethyl Ketone.  
C.A.S. number: 78-93-3.

**Composition Information / Ingredients**

Ingredient / CAS Number	Exposure Limits	Concentration
Methyl Ethyl Ketone CAS Number 78-93-3	OSHA PEL 200ppm-TWA ACGIH TLV 200 ppm-TWA	100%

Notes: If present IARC, OSHA carcinogens and chemicals subject to the reporting requirements of SATA Title III 313 are identified in this section. See definition page for clarification. OSHA/ACGIH Short Term Exposure Limits (STEL) for Methyl Ethyl Ketone is 300 PPM. NIOSH recommends a limit of 200 PPM, 8 hour TWA. This chemical is subject to the reporting requirements of Section 313 of SATA Title III.

**Hazardous Material Identification**

**Eye:** exposure may cause mild eye irritation. Symptoms may include stinging, tearing, and redness.  
**Skin:** exposure causes skin irritation. Prolonged or repeated exposure may dry skin. Symptoms may include redness, burning, drying, cracking, skin burns and skin damage. Pre-existing skin disorders may be aggravated by exposure to this material. Skin absorption is possible, but harmful effects are not expected from this route of exposure under normal conditions of handling and use.  
**Breathing:** exposure to vapor or mist is possible. Short-term inhalation toxicity is low. Breathing small amounts during normal handling is not likely to cause harmful effects: breathing large amounts may be harmful. Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits.  
**Symptoms of exposure** may include, irritation (nose, throat, respiratory tract), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness). Pre-existing lung disorders, (asthma like conditions) may be aggravated by exposure to this material.  
**Swallowing:** single oral toxicity is low. Swallowing small amounts during normal handling is not likely to cause harmful effects; swallowing large amounts may be harmful. Symptoms may include central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, and unconsciousness). This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage.

**Emergency and first aid procedure**

**Primary routes of entry:** skin absorption, inhalation and ingestion.  
**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.  
**Eyes:** move individual away from exposure and into fresh air. Flush eyes gently with water while holding eyelids apart. If symptoms persist or there is any visual difficulty, seek medical attention.  
**Ingestion:** do not induce vomiting. This material is an aspiration hazard. If individual is drowsy or unconscious, place on left side with the head down. Seek medical attention. 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.  
**Effects of chronic overexposure:** 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-Haxine, and/or Ethyl Butyl Ketone. MEK alone has not been shown to cause peripheral neuropathy. This material (or a component) has been shown to cause harm to the fetus in laboratory animal studies. The relevance of these findings to humans is uncertain. Based on the available information, this material cannot be classified with regard to carcinogenicity. IARC, NTP or OSHA does not list this material as a carcinogen. Overexposure to this material (or its components) has been suggested as a cause of the following effects in laboratory animals, and may aggravate pre-existing disorders of these organs in humans: mild reversible liver effects, mild reversible kidney effects.

**Fire and explosion hazard data**

**Flash point:** (TCC): 23° F (-5° C).  
**Explosive limit:** lower 2.0%, upper 11.5%.  
**Extinguishing media:** regular foam or carbon dioxide and carbon monoxide, etc.  
**Fire-fighting procedures:** wear a self-contained breathing apparatus with a full-face piece operated in the positive pressure demand mode with appropriate turn-out gear and chemical resistant personal protective equipment, (see Personal protection).  
**Special fire & explosion hazards:** never use welding or cutting torch on or near drum, even empty because product, even residue can ignite explosively. All five-gallon pails and larger metal containers including tank cars and trucks should be grounded and/or bonded when material is transferred. 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.  
**INFA codes:** Health 1 Flammability 3 Reactivity 0

**Accidental release measures**

**Small spill:** absorb liquid on vermiculite, floor 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 spreading. If runoff occurs, notify authorities as required. Pump or vacuum transfer-spilled product to clean containers for recovery. Absorb unrecovered product. Transfer to contaminated absorbent, soil and other materials to containers for disposal. Prevent run-off to sewers, streams or other bodies of water. If run-offs occur, notify proper authorities as required that a spill has occurred.  
**Waste disposal method:** small spill, dispose of in accordance with all local, state and federal regulations, large spill, dispose of in accordance with all applicable local, state and federal regulations.

**Special precautions and storage data**

Containers of this material may be hazardous when emptied. Containers retain product residues (vapor, liquid, and/or solid), all hazard precautions given in the data sheet must be observed.

Warning: sudden release of hot organic vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment may result in ignition without the presence of obvious ignition sources. Published "auto ignition" 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.

**Personal protection**

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

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

Protective gloves: wear resistant gloves (consult your safety equipment supplier).

Eye protection: chemical splash goggles in compliance with OSHA regulations also permit other type of safety glasses. Consult your safety representative.

Other protection equipment: to prevent repeated or prolonged skin contact, wear impervious clothing and boots.

**Physical properties**

Boiling point: 175° F (79.44° C) @ 760.00 mm hg.

Vapor pressure: 70.00 mm hg @ 68° F (20° C).

Specific vapor density: (air=1): 2.50.

Specific gravity: .805-.807 @ 68° F (20° C).

Percent volatiles: 100%.

Evaporation rate: (N-Butyl Acetate=1): 5.70.

Appearance: clear, alpha color 10 max.

State: liquid.

Form: neat.

**Stability and reactivity**

Hazardous polymerization: cannot occur.

Stability: stable.

Incompatibility: avoid contact with strong oxidizing agents.

**Toxicological information**

No data

**Ecological information**

No data

**Disposal considerations**

Dispose in accordance with all applicable local, state and federal regulations.

**Shipping information**

DOT shipping name: Methyl Ethyl Ketone.

Technical shipping name: Methyl Ethyl Ketone.

DOT hazard classification: 3.

UN number: UN1193.

DOT labels required: red label, Flammable Liquid.

DOT placards required: Flammable Liquid (3).

Freight class: 70.

Packaging group: II.

Packaging, Airfreight:

Passenger aircraft only:	Packaging Inst. (see IATA): Y305	Limited Qty: 1 liter
Passenger/Cargo aircraft only:	Packaging Inst. (see IATA): 305	Limited Qty: 5 liters
Cargo aircraft only:	Packaging Inst. (see IATA): 307	Limited Qty: 60 liters

**Regulatory information****California Proposition 65:**

This product does not contain any chemicals that are listed under California Proposition 65.

**Other information**

The information accumulated herein is believed to be accurate but is not warranted to be whether originating with the company or not. Recipients are advised to confirm in advance of need that the information is correct, applicable, and suitable to their circumstances. This MSDS complies with 29 CFR 1910.1200 (The Hazardous Communication Standard).

Prepared by: C. Boddie

Approval date: 01/02

Supersedes 01/01