

SAVOGRAN COMPANY

Methyl Ethyl Ketone M.E.K.

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4001

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Product Number

4001

Chemtrec

800-424-9300

MATERIAL SAFETY DATA SHEET

A. IDENTIFICATION AND EMERGENCY INFORMATION

Product Name

Methyl Ethyl Ketone
M.E.K.

Product Code

4001

Chemical Name

2-Butanone

CAS Number

78-93-3

Product Appearance and Odor

Clear colorless liquid

B. COMPONENTS AND HAZARD INFORMATION

COMPONENTS

CAS No.
COMPONENTS

APPROXIMATE
CONCENTRATION

Methyl Ethyl Ketone

78-93-3

100%

Hazardous Materials Identification System (HMIS)

Health Flammability Reactivity Basis

2 3 0

Recommended by Savogran

Hazard Rating Least - 0 Slight - 1 Moderate - 2
High - 3 Extreme - 4

Exposure Limit For Total Product Basis

200 PPM (590 mg/m³) TWA

300 PPM (885 mg/m³) STEL

OSHA & ACGIH

C. FIRE AND EXPLOSION HAZARD INFORMATION

Immediately flush eyes with large amounts of water for at least 15 minutes. Get prompt medical attention.

Skin

Immediately flush with large amounts of water; use soap if available. Remove contaminated clothing, including shoes, after flushing has begun.

Inhalation

Using proper respiratory protection, immediately remove the affected victim from exposure. Administer artificial respiration if breathing has stopped. Keep at rest. Call for prompt medical attention.

Ingestion

If swallowed, DO NOT induce vomiting. Keep at rest. Get Prompt medical attention.

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D. FIRE AND EXPLOSION HAZARD INFORMATION

Flash Point (Minimum)

25 °F

Autoignition Temperature

662 °F

National Fire Protection Association (NFPA) – Hazard Identification

Health Flammability Reactivity Basis

1 3 0

Recommended by the National Fire Protection Association

HAZARD RATING Least – 0 Slight – 1 Moderate – 2
High – 3 Extreme – 4

Handling Precautions

This liquid is volatile and gives off invisible vapors. Either the liquid or vapor may settle in low areas or travel some distance along the ground or surface to ignition sources where they may ignite or explode.

Keep product away from ignition sources, such as heat, sparks, pilot lights, static electricity, and open flames.

Flammable or Explosive limits (Approximate percent by volume in air)

Estimated values: lower flammable limit 1.8% Upper Flammable Limit 11.5%

Extinguishing Media and fire Fighting Procedures

Foam, water spray (fog), dry chemical, carbon dioxide and vaporizing liquid type extinguishing agents may all be suitable for extinguishing fires involving this type of product, depending on size or potential size of fire and circumstances related to the situation. Plan fire protection and response strategy through consultation with local fire protection authorities or appropriate specialists.

The following procedures for this type of product are based on the recommendations in the National Fire Protection Association’s “Fire Protection Guide on Hazardous Materials”, Eighth Edition (1984):

Use dry chemical, foam or carbon dioxide to extinguish the fire. Water may be ineffective, but water should be used to keep fire exposed containers cool. If a leak or spill has ignited, use water spray to disperse the vapors and to protect men attempting to stop a leak. Water spray may be used to flush spills away from exposures. Minimize breathing of gases, vapor, fumes or decomposition products. Use supplied air-breathing equipment for enclosed or confined spaces or as otherwise needed.

NOTE: The inclusion of the phrase “water may be ineffective” is to indicate that although water can be used to cool and protect exposed material, water may not extinguish the fire unless used under favorable conditions by experienced fire fighters trained in fighting all types of flammable liquid fires.

Decomposition Products under Fire Conditions

Fumes, smoke, carbon monoxide, and other decomposition products, in the case of incomplete combustion.

“Empty” Container Warning

“Empty” containers retain residue (liquid and/o vapor) and can be dangerous. DO NOT PRESSURIZE, CUT WELD, BRAZE, SOLDER, DRILL, GRIND OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Do not attempt to clean since residue is difficult to remove. “Empty” drums should be completely drained, properly bunged and promptly returned to a drum reconditioner. All other containers should be disposed of in an environmentally safe manner and in accordance with governmental regulations. For work on tanks refer to Occupational Safety and Health Administration regulations, ANSI Z49.1, and other governmental and industrial references pertaining to cleaning, repairing, welding, or other contemplated operations.

E. HEALTH AND HAZARD INFORMATION

Variability among Individuals

Health studies have shown that many petroleum hydrocarbons and synthetic lubricants pose potential human health risks which may vary from person to person. As a precaution, exposure to liquids, vapors, mists or fumes should be minimized.

Effects of overexposure (Signs and Symptoms of Exposure)

Eye Contact:

Severely irritating. If not removed promptly, will injure eye tissue, which may result in permanent damage.

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Skin Contact:

Frequent or prolonged contact may irritate and cause dermatitis. Low order of toxicity.

Inhalation:

High vapor concentrations are irritating to the eyes and the respiratory tract, may cause headaches and dizziness, are anesthetic and may have other central nervous system effects.

Low order of toxicity.

Ingestion:

Low order of toxicity.

Small amounts of the liquid aspirated into the respiratory system during ingestion, or from vomiting, may cause bronchopneumonia or pulmonary edema.

Chronic Effects

There is no evidence that exposure to Methyl Ethyl Ketone (MEK) alone causes progressive or irreversible neurotoxic effects. However, simultaneous overexposure to MEK and n-Hexane can potentiate the known irreversible neurotoxic effects of n-Hexane. There is no reported human evidence that these neurotoxic effects occur when exposure to both chemicals is maintained below established OSHA and ACGIH limits.

Pre-Existing Medical conditions which may be aggravated by exposure

None known

F. PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

Boiling Range

175 - 177°F

Vapor Pressure

83 mm Hg @ 75°F

Specific Gravity (15.6 C/15.6 C)

0.81

Vapor Density (Air=1)

2.5

Molecular Weight

72.12

Percent Volatile by Volume

100%

PH

N/A

Evaporation Rate @ 1 ATM and 25 C (77 F)

6

(n-Butyl Acetate =1)

Pour, Congealing or melting point

32°F

Solubility in water @ 1 ATM and 25 C (77 F)

26.3%

Viscosity

N/A

G. REACTIVITY

Hazardous polymerization will not occur. Product is stable

H. ENVIRONMENT INFORMATION

Steps To Be Taken In Case Material Is Released Or Spilled

Shut off and eliminate all ignition sources. Keep people away. Recover free product. Add sand, earth or other suitable absorbent to spill area. Minimize breathing vapors. Minimize skin contact. Ventilate confined spaces. Open all windows and doors. Keep product out of sewers and watercourses by diking or impounding. Advise authorities if product has entered or may enter sewers, watercourses, or extensive land areas.

Assure conformity with applicable governmental regulations. Continue to observe precautions for volatile, combustible vapors from absorbed material. Handling equipment must be grounded to prevent sparking.

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THE FOLLOWING INFORMATION MAY BE USEFUL IN COMPLYING WITH VARIOUS STATE AND FEDERAL LAWS AND REGULATIONS UNDER VARIOUS ENVIRONMENTAL STATUES:

Reportable Quantity (RQ), EPA Regulation 40 CFR (Cercla Section 102)
The RQ for MEK is 5,000 pounds. This product contains approximately 100% MEK

Threshold planning quantity (TPQ), EPA Regulation 40 CFR 355 (Sara Sections 301 –304)
No TPQ for product or any constant greater than 1% or 0.1% (carcinogen).

Toxic chemical release reporting, EPA Regulation 40 CFR 372 (Sara Section 313)
This product contains 100% MEK

HAZARDOUS CHEMICAL REPORTING, EPA REGULATION 40 CFR 370 (SARA SECTIONS 311-312)

Acute Hazard	Chronic Hazard	Fire Hazard	Pressure Hazard	Reactive Hazard	Not Applicable
XXX	XXX	XXX			

I. PROTECTION AND PRECAUTIONS

Ventilation

Use only with ventilation sufficient to prevent exceeding recommended exposure limit or build up of explosive concentrations of vapor in air. No smoking, flame or other ignition sources. Use explosion-proof ventilation as required to control particulate concentrations.

Respiratory Protection

Use supplied-air respiratory protection in confined or enclosed spaces, if needed.

Protective Gloves

Use chemical-resistant gloves, if needed, to avoid prolonged or repeated skin contact.

Eye Protection

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

Other Protective Equipment

Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing, which could result in prolonged or repeated skin contact.

Work Practices/Engineering Controls

Keep containers closed when not in use. Do not store near heat, sparks, flame or strong oxidants. To prevent fire or explosion risk from static accumulation and discharge, effectively ground product transfer system in accordance with the National Fire Protection Association standard for petroleum products.

In order to prevent fire or explosion hazards, use appropriate equipment.

Information on electrical equipment appropriate for use with this product may be found in the latest edition of the National Electrical Code (NFPA-70). This document is available from the National Fire Protection Association, Batterymarch Park, Quincy, Massachusetts 02269

Personal Hygiene

Minimize breathing vapor or mist. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry-clean before re-use. Remove contaminated shoes and thoroughly clean and dry before re-use. 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. Eye wash fountains and safety showers should be available for emergency.

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J. TRANSPORTATION AND OSHA RELATED LABEL INFORMATION

Transportation Incident Information

For further information relative to spills resulting from transportation incidents, refer to latest Department of Transportation Emergency Response Guidebook for Hazardous Materials Incidents, DOT 5800.3.

DOT Identification Number

MEK/Flammable Liquid/UN1093

OSHA Required Label Information

In compliance with hazard and right-to-know requirements, the following OSHA Hazard Warnings should be found on a label, bill of lading or invoice accompanying this shipment.

DANGER!

FLAMMABLE

Note: Product label will contain additional non-OSHA information.

The information and recommendations contained herein are, to the best of Savogran knowledge and belief accurate and reliable as of the date issued. Savogran does not warrant or guarantee their accuracy or reliability, and Savogran shall not be liable for any loss or damage arising out of the use thereof.

The information and recommendations are offered for the user's consideration and examination, and it is the user's responsibility to satisfy itself that they are suitable and complete for its particular use. If buyer repackages this product legal council should be consulted to insure proper health, safety and other necessary information is included on the container.

The environmental information included under section H hereof as well as the hazardous materials identification system (HMIS) and National Fire Protection Association (NFPA) ratings have been included by Savogran in order to provide additional health and hazard classification information. The ratings recommended are based upon the criteria supplied by the developers of these rating systems, together with Savogran interpretation of the available data.