

METHYL ETHYL KETONE 20023

**1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND OF THE COMPANY/UNDERTAKING**

Ashland	Regulatory Information Number	1-800-325-3751
P.O. Box 2219	Telephone	614-790-3333
Columbus, OH 43216	Emergency telephone number	1-800-ASHLAND (1-800-274-5263)

Product name	METHYL ETHYL KETONE
Product code	20023
Product Use Description	No data

**2. HAZARDS IDENTIFICATION**

**Emergency Overview**

Appearance: liquid, characteristic, Colorless

WARNING! Flammable Liquid, Toxic by inhalation, Moderate skin irritant, Moderate eye irritant.

**Potential Health Effects**

**Routes of exposure**

Inhalation, Skin absorption, Skin contact, Eye Contact, Ingestion

**Eye contact**

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

**Skin contact**

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.

**Ingestion**

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**

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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 are not expected at air concentrations below the recommended exposure limits, if applicable (see Section 8.).

**Aggravated Medical Condition**

Preexisting disorders of the following organs (or organ systems) may be aggravated by exposure to this material: skin, lung (for example, asthma-like conditions)

**Symptoms**

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 Organs**

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 butylketone. 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

**Carcinogenicity**

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 (IARC), the National Toxicology Program (NTP), or the Occupational Safety and Health Administration (OSHA).

**Reproductive hazard.**

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.

**Other information**

No data

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

<b>Components</b>	<b>CAS-No.</b>	<b>Concentration</b>
METHYL ETHYL KETONE	78-93-3	<=100%

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#### **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.

##### **Ingestion**

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.

##### **Notes to physician**

**Hazards:** This material is an aspiration hazard. Potential danger from aspiration must be weighed against possible oral toxicity (See Section 2 - Swallowing) when deciding whether to induce vomiting.

**Treatment:** No information available.

#### **5. FIRE-FIGHTING MEASURES**

##### **Suitable extinguishing media**

foam, water spray, carbon dioxide (CO<sub>2</sub>), dry chemical

##### **Hazardous combustion products**

May form:, carbon dioxide and carbon monoxide

##### **Precautions for fire-fighting**

Material is volatile and readily gives off vapors which may travel along the ground or be moved by ventilation and ignited by pilot lights, flames, sparks, heaters, smoking, electric motors, static discharge or other ignition sources at locations near the

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material handling point. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA).

**Flammability Class for Flammable Liquids**

Flammable Liquid Class IB Flammable Liquid Class IB

**6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions**

For personal protection see section 8. 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.

**Environmental precautions**

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.

**Methods for cleaning up**

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

**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. Static ignition hazard can result from handling and use. Electrically bond and ground all containers, personnel and equipment before transfer or use of material. Special precautions may be necessary to dissipate static electricity for non-conductive containers. Use proper bonding and grounding during product transfer as described in National Fire Protection Association document NFPA 77.

**Storage**

Store in a cool, dry, ventilated area, away from incompatible substances. Do not store near extreme heat, open flame, or sources of ignition.

**8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**Exposure Guidelines**

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METHYL ETHYL KETONE		78-93-3
ACGIH	time weighted average	200 ppm
ACGIH	Short term exposure limit	300 ppm
NIOSH	Recommended exposure limit (REL):	200 ppm
NIOSH	Recommended exposure limit (REL):	590 mg/m3
NIOSH	Short term exposure limit	300 ppm
NIOSH	Short term exposure limit	885 mg/m3
OSHA Z1	Permissible exposure limit	200 ppm
OSHA Z1	Permissible exposure limit	590 mg/m3

**General advice**

These recommendations provide general guidance for handling this product. Personal protective equipment should be selected for individual applications and should consider factors which affect exposure potential, such as handling practices, chemical concentrations and ventilation. It is ultimately the responsibility of the employer to follow regulatory guidelines established by local authorities.

**Exposure controls**

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

**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 and body protection**

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

**Respiratory protection**

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

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Physical state</b>	liquid
<b>Form</b>	No data

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<b>Colour</b>	Colorless
<b>Odour</b>	characteristic, pleasant, acetone-like
<b>Boiling point/range</b>	175.3 °F / 79.6 °C
<b>Melting point/range</b>	-123 °F / -86 °C
<b>pH</b>	No data
<b>Flash point</b>	16 °F / -9 °C Closed Cup
<b>Evaporation rate</b>	5.70 N-Butyl Acetate
<b>Explosion limits</b>	1.8 %(V) 10 %(V)
<b>Vapour pressure</b>	12.13212 kPa @ 77 °F / 25 °C
<b>Vapour density</b>	2.41
<b>Density</b>	0.806 g/cm <sup>3</sup> @ 68.00 °F / 20.00 °C 6.71 lb/gal @ 68 °F / 20 °C
<b>Solubility</b>	partly soluble in water
<b>Partition coefficient (n-octanol/water)</b>	No data
<b>Autoignition temperature</b>	759 °F / 404 °C

**10. STABILITY AND REACTIVITY**

**Stability**

Stable.

**Conditions to avoid**

None known.

**Incompatible products**

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

**Hazardous decomposition products**

May form:, carbon dioxide and carbon monoxide

**Hazardous reactions**

Product will not undergo hazardous polymerization.

**Thermal decomposition**

No data

**11. TOXICOLOGICAL INFORMATION**

**Acute oral toxicity**

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LD 50 Mouse: 670 mg/kg

LD 50 Rat: 2,300 - 3,500 mg/kg

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**Acute inhalation toxicity**

METHYL ETHYL KETONE LC 50 Rat: 11,700 mg/l, 4 h

**Acute dermal toxicity**

METHYL ETHYL KETONE LD 50 Rabbit: 5 g/kg

**12. ECOLOGICAL INFORMATION**

**Aquatic toxicity**

**Acute and Prolonged Toxicity to Fish**

No data

**Acute Toxicity to Aquatic Invertebrates**

No data

**Environmental fate and pathways**

No data

**13. DISPOSAL CONSIDERATIONS**

**Waste disposal methods**

Destroy by incineration in accordance with applicable regulations. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact Ashland Distribution Company, IC&S Environmental Services Group at 800-637-7922.

**14. TRANSPORT INFORMATION**

**IMDG:**

UN1193, METHYL ETHYL KETONE 3, II

**IATA\_P:**

UN1193, Methyl ethyl ketone 3, II

**IATA\_C:**

UN1193, Methyl ethyl ketone 3, II

**CFR\_ROAD:**

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UN1193, Methyl ethyl ketone 3, II

**CFR\_RAIL:**

UN1193, Methyl ethyl ketone 3, II

**CFR\_INWTR:**

UN1193, Methyl ethyl ketone 3, II

**IMDG\_INWTR:**

UN1193, METHYL ETHYL KETONE 3, II

**IMDG\_ROAD:**

UN1193, METHYL ETHYL KETONE 3, II

**IMDG\_RAIL:**

UN1193, METHYL ETHYL KETONE 3, II

Dangerous goods descriptions may not reflect package size, quantity, end-use or region-specific exceptions that can be applied to shipments. Consult shipping documents for material-specific descriptions.

**15. REGULATORY INFORMATION**

**California Prop. 65**

This product does not contain any chemicals known to State of California to cause cancer, birth defects or any other harm.

**Additional regulations**

US. Toxic Substances Control Act (TSCA) Section 8(d) Health & Safety Data Reporting (40 CFR 716, Subpt B)

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US. OSHA Hazard Communication Standard: On One of the Floor Lists of the OSHA HCS (29 CFR 1910.1200).

US. High Production Volume Chemicals

US. Toxic Substances Control Act (TSCA) Section 4 - Master Testing List

US. Drug Enforcement Administration (DEA) Listed Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))

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US. Drug Enforcement Administration (DEA) Listed Essential Chemicals (21 CFR 1310.02(b) and 1310.04(f)(2))  
US. Drug Enforcement Administration (DEA). List 1 & 2 Exempt Chemical Mixtures (21 CFR 1310.12(c))  
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OECD. Program to investigate the potential hazards of high production volume further work.  
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**SARA 313 Component(s)**

**OSHA Hazards**                      Flammable Liquid  
   Toxic by inhalation  
   Moderate skin irritant  
   Moderate eye irritant

	<b>Health</b>	<b>Flammability</b>	<b>Reactivity</b>	<b>Other</b>
<b>HMIS</b>	1*	3	0	
<b>NFPA</b>	1	3	0	

**16. 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 current, applicable, and suitable to their circumstances.

This MSDS has been prepared by Ashland's Environmental Health and Safety Department (1-800-325-3751).