

11/25/2014

MSDS Number: 10000003236

DI-MEK METHYL ETHYL KETONE 20019
Version: 1.1

1. IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

MANUFACTURER'S NAME: DISTINCTIVE IMAGE	ADDRESS: 50 COMMERCE PARKWAY HODGENVILLE, KY 42748
EMERGENCY PHONE : (800) 424 - 9300 INFORMATION PHONE : (800) 223 - 1918 FAX NUMBER : (800) 500 - 9812	
PRODUCT NAME PRODUCT CODE PRODUCT USE DESCRIPTION	Methyl Ethyl Ketone 20019 Reserved for industrial and professional use

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, Colorless

WARNING! FLAMMABLE LIQUID AND VAPOR. MAY AFFECT THE CENTRAL NERVOUS SYSTEM CAUSING DIZZINESS, HEADACHE OR NAUSEA. MAY CAUSE EYE IRRITATION. MAY CAUSE SKIN AND RESPIRATORY TRACT IRRITATION. PROLONGED OR REPEATED CONTACT MAY DRY SKIN AND CAUSE DERMATITIS AND BURNS.

Potential Health Effects

Exposure routes

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

Breathing of vapor or mist is possible. It is possible to breathe this material under certain conditions of handling and use (for example, during heating, spraying, or stirring). 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)

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Version: 1.1**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 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

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.

3. COMPOSITION/INFORMATION ON INGREDIENTS
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Hazardous Components	CAS-No. / trade secret no.	Concentration
Methyl ethyl ketone	78-93-3	100%

4. FIRST AID MEASURES

General Information

Move out of dangerous area. Consult a physician. Show this safety data sheet to the doctor in attendance.

Eyes

If symptoms develop, 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.

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: No information available.

Treatment: No information available.

5. FIREFIGHTING MEASURES

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Suitable extinguishing media

Regular foam (such as AFFF), Agents approved for class B hazards or water fog., Carbon dioxide (CO2), 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 material handling point. Never use welding or cutting torch on or near drum (even empty) because product (even just residue) can ignite explosively. Wear full firefighting turn-out gear (full Bunker gear), and respiratory protection (SCBA). Water may be ineffective for extinguishment unless used under favorable conditions by experienced fire fighters. Use water spray to cool fire exposed containers and structures until fire is out if it can be done with minimal risk. Avoid spreading burning material with water used for cooling purposes.

NFPA Flammable and Combustible Liquids Classification

Flammable Liquid Class IB

6. ACCIDENTAL RELEASE MEASURES

Personal precautions

For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Ensure adequate ventilation. 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. Pay attention to the spreading of gases especially at ground level (heavier than air) and to the direction of the wind.

Environmental precautions

Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system. Local authorities should be advised if significant spillages cannot be contained. 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

Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13).

Other information

Comply with all applicable federal, state, and local regulations. Suppress (knock down) gases/vapors/mists with a water spray jet.

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

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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. 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.

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

Methyl ethyl ketone

78-93-3

ACGIH	8-hour, time-weighted average	200 ppm
ACGIH	Short-term exposure limit	300 ppm
NIOSH	Time-weighted average	200 ppm concentration for up to a 10-hour work day during a 40-hour work week
NIOSH	Time-weighted average	590 mg/m3 concentration for up to a 10-hour work day during a 40-hour workweek
NIOSH	STEL - 15-minute TWA	300 ppm exposure that should not be exceeded at any time during a work day
NIOSH	STEL - 15-minute TWA	885 mg/m3 exposure that should not be exceeded at any time during a work day
OSHA	8-hour time weighted average	200 ppm
OSHA	8-hour time weighted average	590 mg/m3
OSHA	8-hour time weighted average	200 ppm
OSHA	8-hour time weighted average	590 mg/m3
OSHA	Short-term exposure limit	300 ppm
OSHA	Short-term exposure limit	885 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 exposure guidelines (if applicable) or below levels that cause known, suspected or apparent adverse effects.

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.

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Skin and body protection

Wear normal work clothing including long pants, long-sleeved shirts and foot covering to prevent direct contact of the product with the skin. Launder clothing before reuse. If skin irritation develops, contact your facility health and safety professional or your local safety equipment supplier to determine the proper personal protective equipment for your use. Wear resistant gloves (consult your safety equipment supplier).

Discard gloves that show tears, pinholes, or signs of wear.

To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

Respiratory protection

If workplace exposure limit(s) of product is exceeded (see exposure guidelines), a NIOSH approved air-purifying particulate/organic vapor/acid gas combination cartridge is recommended in the absence of proper environmental controls or when there is a potential for dust/vapor inhalation.

9. PHYSICAL AND CHEMICAL PROPERTIES
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Physical state	liquid
Color	Clear / Colorless
Odor	characteristic, pleasant, acetone-like
Boiling point/boiling range	175.26 °F / 79.59 °C
Melting point/range	-123.95 °F / -86.64 °C
Flash point	(Approximate)18 °F / -8 °C Tag closed cup
Evaporation rate	5.70 n-Butyl Acetate
Lower explosion limit/Upper explosion limit	1.4 %(V) / 11.5 %(V)
Vapor pressure	91.000 mmHg @ 77 °F / 25 °C
Relative vapor density	2.41 AIR=1
Density	0.806 g/cm ³ @ 68.00 °F / 20.00 °C
Solubility(ies)	Acetone soluble Alcohol soluble Benzene soluble Ether soluble
log Pow	0.29
Auto-ignition temperature	959 °F / 515 °C
Viscosity, dynamic	0.41 mPa.s @ 20 °C

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

Heat, flames and sparks.

Incompatible products

Copper, Copper alloys, strong alkalis, strong mineral acids, Amines, hydrogen peroxide, Halogenated compounds, isocyanates, Caustics, ammonia, strong oxidizers, nitric acid, amines [Note: Polymerization may occur at elevated temperatures, such as in fire conditions.], Chloroform

Hazardous decomposition products

May form: carbon dioxide and carbon monoxide

Hazardous reactions

Product will not undergo hazardous polymerization. Product will not undergo hazardous polymerization.

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Acute oral toxicity –Product : no data available

Acute oral toxicity - Components

Methyl ethyl ketone : LD50: 2,737 mg/kg Species: rat

Acute inhalation toxicity

Acute inhalation toxicity –Product : no data available

Acute inhalation toxicity - Components

Methyl ethyl ketone : LC50: 320 mg/l Exposure time: 4 h Species: mouse

Acute dermal toxicity

Acute dermal toxicity –Product : no data available

Acute dermal toxicity - Components

Methyl ethyl ketone : LD50: 6,480 mg/kg Species: rabbit

Acute toxicity (other routes of administration)

Acute toxicity (other routes of administration) : no data available

12. ECOLOGICAL INFORMATION**Biodegradability**

Biodegradability - Product : no data available

Biodegradability - Components

Methyl ethyl ketone : 98 % Test substance: Methyl ethyl Ketone
Remarks: Readily biodegradable**Bioaccumulation**

Bioaccumulation - Product : no data available

Ecotoxicity effects**Toxicity to fish**

Toxicity to fish - Product : no data available

Toxicity to fish - Components

Methyl ethyl ketone : LC50: 2,993 mg/l Exposure time: 96 h
Species: Pimephales promelas (fathead minnow)
Test substance: methyl ethyl ketone
Method: Static**Toxicity to daphnia and other aquatic invertebrates**

Toxicity to daphnia and other aquatic invertebrates- Product : no data available

Toxicity to daphnia and other aquatic invertebrates - Components

Methyl ethyl ketone : EC50: 308 mg/l Exposure time: 48 h
Species: Daphnia magna (Water flea)
Test substance: methyl ethyl ketone
Method: Static
Test Type: Immobilization**Toxicity to algae**

Toxicity to algae –Product : no data available

Toxicity to algae - Components

SAFETY DATA SHEET

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Methyl ethyl ketone

: EC50: 2,029 mg/l Exposure time: 96 h
 Species: Pseudokirchneriella subcapitata (green algae)
 Test substance: methyl ethyl ketone
 Method: Static

Toxicity to bacteria

Toxicity to bacteria –Product

: no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

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

14. TRANSPORT INFORMATION

REGULATION

ID NUMBER	PROPER SHIPPING	*HAZARD CLASS	SUBSIDIARY HAZARDS	PACKING GROUP	MARINE POLLUTANT / LTD. QTY.
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U.S. DOT - ROAD

UN 1193	Methyl ethyl ketone	3		II	
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U.S. DOT - RAIL

UN 1193	Methyl ethyl ketone	3		II	
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U.S. DOT - INLAND WATERWAYS

UN 1193	Methyl ethyl ketone	3		II	
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TRANSPORT CANADA - ROAD

UN 1193	Methyl ethyl ketone	3		II	
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TRANSPORT CANADA - RAIL

UN 1193	Methyl ethyl ketone	3		II	
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TRANSPORT CANADA - INLAND WATERWAYS

UN 1193	Methyl ethyl ketone	3		II	
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INTERNATIONAL MARITIME DANGEROUS GOODS

UN 1193	Methyl ethyl ketone	3		II	
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN 1193	Methyl ethyl ketone	3		II	
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN 1193	Methyl ethyl ketone	3		II	
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN 1193	ETILMETILCETONA	3		II	
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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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Dangerous goods descriptions (if indicated above) may not reflect quantity, end-use or region-specific exceptions that can be applied. Consult shipping documents for descriptions that are specific to the shipment.

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 reproductive harm.

SARA Hazard Classification

SARA 311/312 Classification

Fire Hazard

Acute Health Hazard

Canadian National Pollutant Release Inventory (NPRI)

Listed. See the regulation for additional information. See the regulation for additional information.

New Jersey RTK Label Information

Methyl ethyl ketone 78-93-3

Pennsylvania RTK Label Information

Methyl ethyl ketone 78-93-3

Notification status

United States TSCA Inventory y (positive listing)

Canadian Domestic Substances List (DSL) y (positive listing)

Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302) 5000 lbs

Reportable quantity-Components

Methyl ethyl ketone 78-93-3 5000 lbs

	HMIS	NFPA
Health	2*	1
Flammability	3	3
Physical hazards	0	
Instability		0
Specific Hazard	--	--

16. OTHER INFORMATION

The information accumulated is based on the data of which we are aware and is believed to be correct as of the date hereof. Since this information may be applied under conditions beyond our control and with which we may be unfamiliar and since data made become available subsequently to the date hereof, we do not assume any responsibility for the results of its use. Recipients are advised to confirm in advance of need that the information is current, applicable, and suitable to their circumstances.