

SAFETY DATA SHEET

Revision Date: 06/16/2011

Print Date: 9/25/2013

MSDS Number: R0393534

Version: 1.3

TMEK
71840

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

Nexeo Solutions	Regulatory Information Number	1-800-325-3751
PO Box 2458	Telephone	1-800-531-7106
Columbus, OH 43216	Emergency telephone number	1-855-639-3648

Product name TMEK

Product code 71840
Product Use Description No data

2. HAZARDS IDENTIFICATION

Emergency Overview

Appearance: liquid, white

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. Symptoms may include redness and burning of skin, and other skin damage. Prolonged or repeated contact may dry the skin. Symptoms may include redness, burning, and drying and cracking of skin, skin burns, and other skin damage.

Ingestion

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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. 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, Upper respiratory tract, lung (for example, asthma-like conditions), Kidney, Central nervous system, auditory system, Individuals with preexisting heart disorders maybe more susceptible to arrhythmias (irregular heartbeats) if exposed to high concentrations of this material.

Symptoms

Signs and symptoms of exposure to this material through breathing, swallowing, and/or passage of the material through the skin may include: metallic taste, stomach or intestinal upset (nausea, vomiting, diarrhea), irritation (nose, throat, airways), runny nose, central nervous system excitation (giddiness, liveliness, light-headed feeling) followed by central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness) and other central nervous system effects, temporary changes in mood and behavior, Lack of coordination, confusion, irregular heartbeat, coma

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., Prolonged intentional toluene abuse may lead to damage to many organ systems having effects on: central and peripheral nervous systems, vision, hearing, liver, kidneys, heart and blood. Such abuse has been associated with brain damage characterized by disturbances in gait, personality changes and loss of memory. Comparable central nervous system effects have not been shown to result from occupational exposure to toluene., Prolonged intentional toluene abuse may lead to hearing loss progressing to deafness. In addition, while noise is known to cause hearing loss in humans, it has been suggested that workers exposed to organic solvents, including toluene, along with noise may suffer greater hearing loss than would be expected from exposure to noise alone., 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, respiratory tract damage (nose, throat, and airways), effects on hearing,

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central nervous system damage, Overexposure to this material (or its components) has been suggested as a cause of the following effects in humans:, kidney damage

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., Toluene may be harmful to the human fetus based on positive test results with laboratory animals. Case studies show that prolonged intentional abuse of toluene during pregnancy can cause birth defects in humans.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Hazardous Components	CAS-No.	Concentration
METHYL ETHYL KETONE	78-93-3	>=80-<90%
TOLUENE	108-88-3	>=15-<20%

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.

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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: Inhalation of high concentrations of this material, as could occur in enclosed spaces or during deliberate abuse, may be associated with cardiac arrhythmias. Sympathomimetic drugs may initiate cardiac arrhythmias in persons exposed to this material.

Treatment: No information available.

5. FIRE-FIGHTING MEASURES

Suitable extinguishing media

Dry chemical, Carbon dioxide (CO2), Water spray

Hazardous combustion products

carbon dioxide and carbon monoxide, Hydrocarbons

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

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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). 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.

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/vapours/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 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.

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Storage

Store in a cool, dry, ventilated area, away from incompatible substances.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Guidelines

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
TOLUENE		108-88-3
ACGIH	time weighted average	20 ppm
NIOSH	Recommended exposure limit (REL):	100 ppm
NIOSH	Recommended exposure limit (REL):	375 mg/m3
NIOSH	Short term exposure limit	150 ppm
NIOSH	Short term exposure limit	560 mg/m3
OSHA Z2	time weighted average	200 ppm
OSHA Z2	Ceiling Limit Value:	300 ppm
OSHA Z2	Maximum concentration:	500 ppm

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

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Wear chemical splash goggles when there is the potential for exposure of the eyes to liquid, vapor or mist.

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.

Respiratory protection

A NIOSH-approved air-purifying respirator with an appropriate cartridge and/or filter may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits (if applicable) or if overexposure has otherwise been determined. Protection provided by air-purifying respirators is limited. Use a positive pressure, air-supplied respirator if there is any potential for uncontrolled release, exposure levels are not known or any other circumstances where an air-purifying respirator may not provide adequate protection.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state	liquid
Form	no data available
Colour	white
Odour	hydrocarbon-like
Boiling point/boiling range	175.3 °F / 79.6 °C Calculated Phase Transition Liquid/Gas
Melting point/range	no data available
Sublimation point	no data available
pH	no data available
Flash point	25 °F / -4 °C Tag closed cup
Ignition temperature	no data available
Evaporation rate	1 Ethyl Ether
Lower explosion limit/Upper explosion limit	1.27 %(V) / 10 %(V)
Particle size	no data available
Vapour pressure	121.321 hPa @ 77 °F / 25 °C Calculated Vapor Pressure
Relative vapour density	(>)1 AIR=1

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Density	0.815 g/cm ³ @ 68.00 °F / 20.00 °C 6.79 lb/gal @ 68.00 °F / 20.00 °C
Bulk density	No data
Water solubility	no data available
Solubility(ies)	no data available
Partition coefficient: n-octanol/water	no data available
log Pow	no data available
Autoignition temperature	no data available
Viscosity, dynamic	no data available
Viscosity, kinematic	no data available
Solids in Solution	no data available
Decomposition temperature	no data available
Burning number	no data available
Dust explosion constant	no data available
Minimum ignition energy	no data available

10. STABILITY AND REACTIVITY

Stability

Stable.

Conditions to avoid

Heat, flames and sparks.

Incompatible products

Amines, Copper, Copper alloys, Strong acids, strong alkalis, Strong oxidizing agents

Hazardous decomposition products

carbon dioxide and carbon monoxide, Hydrocarbons

Hazardous reactions

Product will not undergo hazardous polymerization.

Thermal decomposition

No data

11. TOXICOLOGICAL INFORMATION

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Acute oral toxicity

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

TOLUENE : LD 50 Rat: 2.6 g/kg

Acute inhalation toxicity

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

TOLUENE : LC 50 Rat: 8000 ppm; 4 h
LC 50 Rat: 8,000 mg/l; 4 h
LC 50 Rat: 12,200 mg/l; 2 h

Acute dermal toxicity

METHYL ETHYL KETONE : LD 50 Rabbit: > 5 g/kg

TOLUENE : LD 50 Rabbit: 12,124 mg/kg

12. ECOLOGICAL INFORMATION

Biodegradability

METHYL ETHYL KETONE : no data available

TOLUENE : no data available

Bioaccumulation

METHYL ETHYL KETONE : no data available

TOLUENE : Species: Ide, silver or golden orfe (Leuciscus idus)
Exposure time: 3 d
Dose: 0.05 mg/l
Bioconcentration factor (BCF): 94
Method: Not reported

Ecotoxicity effects

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Toxicity to fish

METHYL ETHYL KETONE : 96 h flow-through test LC 50 Fathead minnow
(Pimephales promelas): 3,130.00 - 3,320.00 mg/l ;
Mortality

TOLUENE : 96 h Renewal LC 50 Rainbow trout, donaldson trout
(Oncorhynchus mykiss): 5.80 mg/l
96 h static test LC 50 Fathead minnow (Pimephales
promelas): 12.60 mg/l

Toxicity to daphnia and other aquatic invertebrates.

METHYL ETHYL KETONE : 48 h static test EC 50 Water flea (Daphnia magna):
4,025.00 - 6,440.00 mg/l Intoxication

TOLUENE : 48 h static test EC 50 Water flea (Daphnia magna):
6.00 mg/l

Toxicity to algae

METHYL ETHYL KETONE : no data available

TOLUENE : no data available

Toxicity to bacteria

METHYL ETHYL KETONE : no data available

TOLUENE : no data available

Biochemical Oxygen Demand (BOD)

METHYL ETHYL KETONE : no data available

TOLUENE : no data available

Chemical Oxygen Demand (COD)

METHYL ETHYL KETONE : no data available

TOLUENE : no data available

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Additional ecological information

METHYL ETHYL KETONE : no data available

TOLUENE : no data available

13. DISPOSAL CONSIDERATIONS

Waste disposal methods

Dispose of in accordance with all applicable local, state and federal regulations. Do not discharge effluent containing this product into lakes, streams, ponds or estuaries, oceans, or other waters unless in accordance with the requirements of a National Pollutant Discharge Elimination System (NPDES) permit, and the permitting authority has been notified in writing prior to discharge. Do not discharge effluent containing this product to sewer systems without previously notifying the local sewage treatment plant authority. For guidance, contact your State Water Board or Regional Office of the EPA. For assistance with your waste management needs - including disposal, recycling and waste stream reduction, contact NEXEO's Environmental Services Group at 800-637-7922.

14. TRANSPORT INFORMATION

REGULATION

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

UN 1993	Flammable liquids, n.o.s. (METHYL ETHYL KETONE)	3		II	
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U.S. DOT - RAIL

UN 1993	Flammable liquids, n.o.s. (METHYL ETHYL KETONE)	3		II	
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U.S. DOT - INLAND WATERWAYS

UN 1993	Flammable liquids, n.o.s. (METHYL ETHYL KETONE)	3		II	
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TRANSPORT CANADA - ROAD

UN	1993	FLAMMABLE LIQUID, N.O.S. (METHYL ETHYL KETONE)	3	II
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TRANSPORT CANADA - RAIL

UN	1993	FLAMMABLE LIQUID, N.O.S. (METHYL ETHYL KETONE)	3	II
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TRANSPORT CANADA - INLAND WATERWAYS

UN	1993	FLAMMABLE LIQUID, N.O.S. (METHYL ETHYL KETONE)	3	II
----	------	---	---	----

INTERNATIONAL MARITIME DANGEROUS GOODS

UN	1993	FLAMMABLE LIQUID, N.O.S. (METHYL ETHYL KETONE)	3	II
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - CARGO

UN	1993	Flammable liquid, n.o.s. (METHYL ETHYL KETONE)	3	II
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INTERNATIONAL AIR TRANSPORT ASSOCIATION - PASSENGER

UN	1993	Flammable liquid, n.o.s. (METHYL ETHYL KETONE)	3	II
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MEXICAN REGULATION FOR THE LAND TRANSPORT OF HAZARDOUS MATERIALS AND WASTES

UN	1993	LIQUIDO INFLAMABLE, N.E.P. (METHYL ETHYL KETONE)	3	II
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*ORM = ORM-D, CBL = COMBUSTIBLE LIQUID

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

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WARNING! This product contains a chemical known to the State of California to cause cancer.	ETHYL BENZENE BENZENE
WARNING! This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.	TOLUENE BENZENE

SARA Hazard Classification

Fire Hazard
Acute Health Hazard
Chronic Health Hazard

SARA 313 Component(s)

TOLUENE 15.99 %

New Jersey RTK Label Information

METHYL ETHYL KETONE 78-93-3
TOLUENE 108-88-3

Pennsylvania RTK Label Information

METHYL ETHYL KETONE 78-93-3
TOLUENE 108-88-3
BENZENE 71-43-2

Notification status

EU. EINECS y (positive listing)
US. Toxic Substances Control Act y (positive listing)
Australia. Industrial Chemical (Notification and Assessment) Act n (Negative listing)
Canada. Canadian Environmental Protection Act (CEPA). y (positive listing)
Domestic Substances List (DSL). (Can. Gaz. Part II, Vol. 133)
Japan. Kashin-Hou Law List y (positive listing)
Korea. Toxic Chemical Control Law (TCCL) List y (positive listing)
Philippines. The Toxic Substances and Hazardous and Nuclear Waste Control Act y (positive listing)
China. Inventory of Existing Chemical Substances y (positive listing)

Reportable quantity - Product

US. EPA CERCLA Hazardous Substances (40 CFR 302) 5951 lbs

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Reportable quantity-Components

METHYL ETHYL KETONE

78-93-3

5000 lbs

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

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 NEXEO's Environmental Health and Safety Department (1-800-325-3751).