SAFETY-KLEEN METHYL ETHYL KETONE

Safety Data Sheet

According To Federal Register / Vol. 77, No. 58 / Monday, March 26, 2012 / Rules And Regulations And According To The Hazardous Products Regulation (February 11, 2015).

Revision Date: 08/12/2022 Date of Issue: 05/13/2015 Supersedes Date: 03/20/2019 Version: 2.0

SECTION 1: IDENTIFICATION

1.1. Product Identifier

Product Form: Substance

Product Name: SAFETY-KLEEN METHYL ETHYL KETONE

Product Code: Not avaiable.

Synonyms: Butanone; 2-Butanone; Ethyl Methyl Ketone; Methyl Acetone; MEK

SDS No: 820204

1.2. Intended Use of the Product

Industrial Solvent.

1.3. Name, Address, and Telephone of the Responsible Party

Safety-Kleen Systems, Inc.
42 Longwater Drive
Norwell, MA 02061
www.safety-kleen.com
1-800-669-5740

1.4. Emergency Telephone Number

Emergency Number : 1-800-468-1760

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the Substance or Mixture

GHS-US/CA Classification

Flammable liquids Category 2	H225
Serious eye damage/eye irritation Category 2	H319
Reproductive toxicity Category 2	H361
Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation	H335

2.2. Label Elements

GHS-US/CA Labeling

Hazard Pictograms (GHS-US/CA) :

GHS02 GHS07 GHS08

Signal Word (GHS-US/CA) : Danger

Hazard Statements (GHS-US/CA) :
H225 - Highly flammable liquid and vapor.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.
H361 - Suspected of damaging fertility or the unborn child.

Precautionary Statements (GHS-US/CA) :
P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233 - Keep container tightly closed.
P240 - Ground/bond container and receiving equipment.
P241 - Use explosion-proof electrical, ventilating, and lighting equipment.
P242 - Use only non-sparking tools.
P243 - Take action to prevent static discharges.
P261 - Avoid breathing vapors, mist, or spray.
P263 - Avoid contact during pregnancy/while nursing.
P264 - Wash hands, forearms, and other exposed areas thoroughly after handling.
P271 - Use only outdoors or in a well-ventilated area.

P280 - Wear eye protection, face protection, protective clothing, protective gloves.
P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water .
P304+P340 - IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308+P313 - If exposed or concerned: Get medical advice/attention.
P337+P313 - If eye irritation persists: Get medical advice/attention.
P403+P235 - Store in a well-ventilated place. Keep cool.
P405 - Store locked up.
P501 - Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

2.3. Other Hazards

Exposure may aggravate pre-existing eye, skin, or respiratory conditions.

2.4. Unknown Acute Toxicity (GHS-US/CA)

No additional information available

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substance

Name : SAFETY-KLEEN METHYL ETHYL KETONE

Name	Synonyms	Product Identifier	% *	GHS Ingredient Classification
Methyl ethyl ketone	Butan-2-one / 2-Butanone / Ethyl methyl ketone / Methyl acetone / MEK / Butanone / methyl ethyl ketone	(CAS-No.) 78-93-3	99 – 100	Flam. Liq. 2, H225 Eye Irrit. 2, H319 Repr. 2, H361 STOT SE 3, H335

Full text of H-statements: see section 16

3.2. Mixture

Not applicable

*Percentages are listed in weight by weight percentage (w/w%) for liquid and solid ingredients. Gas ingredients are listed in volume by volume percentage (v/v%).

SECTION 4: FIRST AID MEASURES

4.1. Description of First-aid Measures

General: Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

Inhalation: Give oxygen or artificial respiration if necessary. If inhaled, remove to fresh air and keep at rest in a position comfortable for breathing. Obtain medical attention if breathing difficulty persists.

Skin Contact: Immediately drench affected area with water for at least 15 minutes. Immediately remove contaminated clothing. If exposed or concerned: Get medical advice/attention.

Eye Contact: Immediately rinse with water for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Obtain medical attention if irritation develops or persists.

Ingestion: Rinse mouth. Do NOT induce vomiting. Obtain medical attention.

4.2. Most Important Symptoms and Effects Both Acute and Delayed

General: May cause respiratory irritation. Suspected of damaging fertility or the unborn child. Causes serious eye irritation.

Inhalation: Irritation of the respiratory tract and the other mucous membranes.

Skin Contact: Prolonged exposure may cause skin irritation.

Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of damaging fertility or the unborn child.

4.3. Indication of Any Immediate Medical Attention and Special Treatment Needed

If exposed or concerned, get medical advice and attention. If medical advice is needed, have product container or label at hand.

SECTION 5: FIRE-FIGHTING MEASURES

5.1. Extinguishing Media

Suitable Extinguishing Media: Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO_2). Water may be ineffective but water should be used to keep fire-exposed container cool.

Unsuitable Extinguishing Media: Do not use a heavy water stream. A heavy water stream may spread burning liquid.

5.2. Special Hazards Arising From the Substance or Mixture

Fire Hazard: Highly flammable liquid and vapor. Vapors are heavier than air and may travel considerable distance to an ignition source and flash back to source of vapors.

Explosion Hazard: May form flammable or explosive vapor-air mixture.

Reactivity: Reacts violently with strong oxidizers. Increased risk of fire or explosion.

5.3. Advice for Firefighters

Precautionary Measures Fire: Exercise caution when fighting any chemical fire.

Firefighting Instructions: Use water spray or fog for cooling exposed containers. In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

Protection During Firefighting: Do not enter fire area without proper protective equipment, including respiratory protection. Wear full fire-fighting turn-out gear (full Bunker gear) and respiratory protection (SCBA).

Hazardous Combustion Products: Carbon oxides (CO, CO_2). Unidentified organic compounds.

5.4. Reference to Other Sections

Refer to Section 9 for flammability properties.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal Precautions, Protective Equipment and Emergency Procedures

General Measures: Avoid all contact with skin, eyes, or clothing. Do not get in eyes, on skin, or on clothing. Do not breathe vapor, mist or spray. Keep away from heat, hot surfaces, sparks, open flames, and other ignition sources. No smoking. Use special care to avoid static electric charges.

6.1.1. For Non-Emergency Personnel

Protective Equipment: Use appropriate personal protective equipment (PPE).

Emergency Procedures: Remove ignition sources. Ventilate area. Evacuate unnecessary personnel. Stop leak if safe to do so. Do not touch or walk on the spilled product. Avoid breathing vapors, mist, or spray.

6.1.2. For Emergency Personnel

Protective Equipment: Equip cleanup crew with proper protection.

Emergency Procedures: Eliminate ignition sources first, then ventilate the area. Upon arrival at the scene, a first responder is expected to recognize the presence of dangerous goods, protect oneself and the public, secure the area, and call for the assistance of trained personnel as soon as conditions permit.

6.2. Environmental Precautions

Prevent entry to sewers and public waters.

6.3. Methods and Materials for Containment and Cleaning Up

For Containment: Contain any spills with dikes or absorbents to prevent migration and entry into sewers or streams. As an immediate precautionary measure, isolate spill or leak area in all directions.

Methods for Cleaning Up: Do not take up in combustible material such as: saw dust or cellulosic material. Absorb and/or contain spill with inert material. Use only non-sparking tools. Clean up spills immediately and dispose of waste safely. Transfer spilled material to a suitable container for disposal. Contact competent authorities after a spill.

6.4. Reference to Other Sections

See Section 8 for exposure controls and personal protection and Section 13 for disposal considerations.

SECTION 7: HANDLING AND STORAGE

7.1. Precautions for Safe Handling

Additional Hazards When Processed: Handle empty containers with care because residual vapors are flammable.

Precautions for Safe Handling: Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use only non-sparking tools. Use explosion-proof equipment. Take precautionary measures against static discharge. Ground containers when transferring. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with eyes, skin and clothing. Avoid breathing vapors, spray, mist.

Hygiene Measures: Handle in accordance with good industrial hygiene and safety procedures.

7.2. Conditions for Safe Storage, Including Any Incompatibilities

Technical Measures: Comply with applicable regulations. Take action to prevent static discharges. Ground and bond container and receiving equipment. Use explosion-proof electrical, ventilating, and lighting equipment.

Storage Conditions: Keep/Store away from direct sunlight, extremely high or low temperatures and incompatible materials. Store in a dry, cool place. Store locked up/in a secure area. Store in a well-ventilated place. Keep container tightly closed. Keep in fireproof place.

Incompatible Materials: Strong acids, strong bases, strong oxidizers.

7.3. Specific End Use(s)

Industrial Solvent.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control Parameters

For substances listed in section 3 that are not listed here, there are no established exposure limits from the manufacturer, supplier, importer, or the appropriate advisory agency including: ACGIH (TLV), AIHA (WEEL), NIOSH (REL), OSHA (PEL), or Canadian provincial governments.

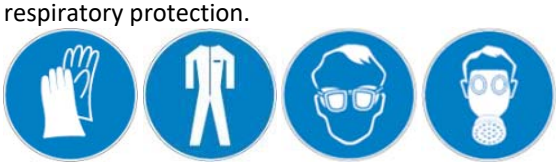
Methyl ethyl ketone (78-93-3)		
USA ACGIH	ACGIH OEL TWA [ppm]	200 ppm
USA ACGIH	ACGIH OEL STEL [ppm]	300 ppm
USA ACGIH	BEI (BLV)	2 mg/l Parameter: MEK - Medium: urine - Sampling time: end of shift (nonspecific)
USA OSHA	OSHA PEL (TWA) [1]	590 mg/m³
USA OSHA	OSHA PEL (TWA) [2]	200 ppm
USA NIOSH	NIOSH REL (TWA)	590 mg/m³
USA NIOSH	NIOSH REL TWA [ppm]	200 ppm
USA NIOSH	NIOSH REL (STEL)	885 mg/m³
USA NIOSH	NIOSH REL STEL [ppm]	300 ppm
USA IDLH	IDLH [ppm]	3000 ppm
Alberta	OEL STEL	885 mg/m³
Alberta	OEL STEL [ppm]	300 ppm
Alberta	OEL TWA	590 mg/m³
Alberta	OEL TWA [ppm]	200 ppm
British Columbia	OEL STEL [ppm]	100 ppm
British Columbia	OEL TWA [ppm]	50 ppm
Manitoba	OEL STEL [ppm]	300 ppm
Manitoba	OEL TWA [ppm]	200 ppm
New Brunswick	OEL STEL	885 mg/m³
New Brunswick	OEL STEL [ppm]	300 ppm
New Brunswick	OEL TWA	590 mg/m³
New Brunswick	OEL TWA [ppm]	200 ppm
Newfoundland & Labrador	OEL STEL [ppm]	300 ppm
Newfoundland & Labrador	OEL TWA [ppm]	200 ppm
Nova Scotia	OEL STEL [ppm]	300 ppm
Nova Scotia	OEL TWA [ppm]	200 ppm
Nunavut	OEL STEL [ppm]	300 ppm
Nunavut	OEL TWA [ppm]	200 ppm
Northwest Territories	OEL STEL [ppm]	300 ppm
Northwest Territories	OEL TWA [ppm]	200 ppm
Ontario	OEL STEL [ppm]	300 ppm
Ontario	OEL TWA [ppm]	200 ppm
Prince Edward Island	OEL STEL [ppm]	300 ppm
Prince Edward Island	OEL TWA [ppm]	200 ppm
Québec	VECD (OEL STEL)	300 mg/m³
Québec	VECD (OEL STEL) [ppm]	100 ppm

Québec	VEMP (OEL TWA)	150 mg/m³
Québec	VEMP (OEL TWA) [ppm]	50 ppm
Saskatchewan	OEL STEL [ppm]	300 ppm
Saskatchewan	OEL TWA [ppm]	200 ppm
Yukon	OEL STEL	740 mg/m³
Yukon	OEL STEL [ppm]	250 ppm
Yukon	OEL TWA	590 mg/m³
Yukon	OEL TWA [ppm]	200 ppm

8.2. Exposure Controls

Appropriate Engineering Controls: Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Ensure adequate ventilation, especially in confined areas. Ensure all national/local regulations are observed. Gas detectors should be used when flammable gases or vapors may be released. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof equipment.

Personal Protective Equipment: Gloves. Protective clothing. Safety glasses with side-shields. Insufficient ventilation: wear respiratory protection.



Materials for Protective Clothing: Chemically resistant materials and fabrics.

Hand Protection: Wear protective gloves.

Eye and Face Protection: Safety glasses with side-shields. Faceshield as determined by task.

Skin and Body Protection: Wear suitable protective clothing.

Respiratory Protection: If exposure limits are exceeded or irritation is experienced, approved respiratory protection should be worn. In case of inadequate ventilation, oxygen deficient atmosphere, or where exposure levels are not known wear approved respiratory protection.

Other Information: When using, do not eat, drink or smoke.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on Basic Physical and Chemical Properties

Physical State	:	Liquid
Appearance	:	Clear. Colorless.
Odor	:	No data available
Odor Threshold	:	No data available
pH	:	No data available
Evaporation Rate	:	2.7 (butyl acetate = 1)
Melting Point	:	-86 °C (-122.8 °F)
Freezing Point	:	-86 °C (-122.8 °F)
Boiling Point	:	80 °C (176 °F)
Flash Point	:	-9 °C (15.8 °F)
Auto-ignition Temperature	:	404 °C (759.2 °F)
Decomposition Temperature	:	No data available
Flammability (solid, gas)	:	Not applicable
Lower Flammable Limit	:	1.4 %
Upper Flammable Limit	:	11.4 %
Vapor Pressure	:	78 mm Hg at 68°F (20°C)
Relative Vapor Density at 20°C	:	2.5 (air = 1)
Relative Density	:	No data available
Specific Gravity	:	0.81 @ 20°C (68°F)
Solubility	:	No data available
Partition Coefficient: N-Octanol/Water	:	No data available
Viscosity	:	No data available

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity:

Reacts violently with strong oxidizers. Increased risk of fire or explosion.

10.2. Chemical Stability:

Highly flammable liquid and vapor. May form flammable or explosive vapor-air mixture.

10.3. Possibility of Hazardous Reactions:

Hazardous polymerization will not occur.

10.4. Conditions to Avoid:

Direct sunlight, extremely high or low temperatures, heat, hot surfaces, sparks, open flames, incompatible materials, and other ignition sources.

10.5. Incompatible Materials:

Strong acids, strong bases, strong oxidizers.

10.6. Hazardous Decomposition Products:

Thermal decomposition may produce: Carbon oxides (CO, CO_2). Unidentified organic compounds.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on Toxicological Effects - Product

Acute Toxicity (Oral): Not classified

Acute Toxicity (Dermal): Not classified

Acute Toxicity (Inhalation): Not classified

LD50 and LC50 Data:

No additional information available

Skin Corrosion/Irritation: Not classified

Eye Damage/Irritation: Causes serious eye irritation.

Respiratory or Skin Sensitization: Not classified

Germ Cell Mutagenicity: Not classified

Carcinogenicity: Not classified

Specific Target Organ Toxicity (Repeated Exposure): Not classified

Reproductive Toxicity: Suspected of damaging fertility or the unborn child.

Specific Target Organ Toxicity (Single Exposure): May cause respiratory irritation.

Aspiration Hazard: Not classified

Symptoms/Injuries After Inhalation: Irritation of the respiratory tract and the other mucous membranes.

Symptoms/Injuries After Skin Contact: Prolonged exposure may cause skin irritation.

Symptoms/Injuries After Eye Contact: Contact causes severe irritation with redness and swelling of the conjunctiva.

Symptoms/Injuries After Ingestion: Ingestion may cause adverse effects.

Chronic Symptoms: Suspected of damaging fertility or the unborn child.

11.2. Information on Toxicological Effects - Ingredient(s)

LD50 and LC50 Data:

Methyl ethyl ketone (78-93-3)	
LD50 Oral Rat	2483 mg/kg
LD50 Dermal Rabbit	5000 mg/kg
LC50 Inhalation Rat	11700 ppm/4h

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Ecology - General: Not classified.

Methyl ethyl ketone (78-93-3)	
LC50 Fish 1	3130 – 3320 mg/l (Exposure time: 96 h - Species: Pimephales promelas [flow-through])
EC50 - Crustacea [1]	> 520 mg/l (Exposure time: 48 h - Species: Daphnia magna)
EC50 - Crustacea [2]	5091 mg/l (Exposure time: 48 h - Species: Daphnia magna)

12.2. Persistence and Degradability

SFAETY-KLEEN METHYL ETHYL KETONE	
Persistence and Degradability	Not established.

12.3. Bioaccumulative Potential

SAFETY-KLEEN METHYL ETHYL KETONE	
Bioaccumulative Potential	Not established.

Methyl ethyl ketone (78-93-3)	
Partition coefficient n-octanol/water (Log Pow)	0.3

12.4. Mobility in Soil

No additional information available

12.5. Other Adverse Effects

Other Information: Avoid release to the environment.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Waste Disposal Recommendations: Dispose of contents/container in accordance with local, regional, national, territorial, provincial, and international regulations.

Additional Information: Handle empty containers with care because residual vapors are flammable.

Ecology - Waste Materials: Avoid release to the environment.

SECTION 14: TRANSPORT INFORMATION

The shipping description(s) stated herein were prepared in accordance with certain assumptions at the time the SDS was authored, and can vary based on a number of variables that may or may not have been known at the time the SDS was issued.

14.1. In Accordance with DOT

Proper Shipping Name : METHYL ETHYL KETONE
Hazard Class : 3
Identification Number : UN1193
Label Codes : 3

Packing Group : II
ERG Number : 127

14.2. In Accordance with IMDG

Proper Shipping Name : ETHYL METHYL KETONE (METHYL ETHYL KETONE)
Hazard Class : 3
Identification Number : UN1193
Label Codes : 3

Packing Group : II
EmS-No. (Fire) : F-E
EmS-No. (Spillage) : S-D

14.3. In Accordance with IATA

Proper Shipping Name : METHYL ETHYL KETONE
Hazard Class : 3
Identification Number : UN1193
Label Codes : 3

Packing Group : II
ERG Code (IATA) : 3L

14.4. In Accordance with TDG

Proper Shipping Name : METHYL ETHYL KETONE
Hazard Class : 3
Identification Number : UN1193
Label Codes : 3

Packing Group : II

SECTION 15: REGULATORY INFORMATION

15.1. US Federal Regulations

SAFETY-KLEEN METHYL ETHYL KETONE

SARA Section 311/312 Hazard Classes	Health hazard - Specific target organ toxicity (single or repeated exposure) Health hazard - Reproductive toxicity Physical hazard - Flammable (gases, aerosols, liquids, or solids) Health hazard - Serious eye damage or eye irritation

Methyl ethyl ketone (78-93-3)	
Listed on the United States TSCA (Toxic Substances Control Act) inventory - Status: Active	
CERCLA RQ	5000 lb

15.2. US State Regulations

Methyl ethyl ketone (78-93-3)
U.S. - New Jersey - Right to Know Hazardous Substance List
U.S. - Pennsylvania - RTK (Right to Know) List
U.S. - Massachusetts - Right To Know List
U.S. - Pennsylvania - RTK (Right to Know) - Environmental Hazard List

15.3. Canadian Regulations

Methyl ethyl ketone (78-93-3)
Listed on the Canadian DSL (Domestic Substances List)

SECTION 16: OTHER INFORMATION, INCLUDING DATE OF PREPARATION OR LAST REVISION

Date of Preparation or Latest Revision : 08/12/2022

Other Information : This document has been prepared in accordance with the SDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200 and Canada's Hazardous Products Regulations (HPR) SOR/2015-17.

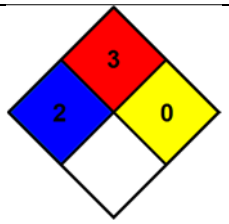
GHS Full Text Phrases:

H225	Highly flammable liquid and vapor
H319	Causes serious eye irritation
H335	May cause respiratory irritation
H361	Suspected of damaging fertility or the unborn child

NFPA Health Hazard : 2 - Materials that, under emergency conditions, can cause temporary incapacitation or residual injury.

NFPA Fire Hazard : 3 - Liquids and solids (including finely divided suspended solids) that can be ignited under almost all ambient temperature conditions.

NFPA Reactivity Hazard : 0 - Material that in themselves are normally stable, even under fire conditions.



The information contained herein is correct to the best of our knowledge, information, and belief and is designed only as guidance for the handling, use, processing, storage, transportation, disposal, and release of the product. User assumes all risks incident to use of this product and shall determine the quality and suitability of the product for its use. Supplier offers no warranty, express or implied, whatsoever, including warranties of merchantability or fitness for a particular purpose or otherwise, and specifically disclaims any and all liability for incidental, consequential, or other damages arising out the use or misuse of the product. The information provided relates only to the specific material provided and may not be valid if used in combination with any other materials or process, unless specified herein.

NA GHS SDS 2015 (Can, US)