



# Safety Data Sheet

According to Hazardous Products Regulation (SOR/2015-17)

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## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### Product identifier

Trade name/designation:	Methyl ethyl ketone
Product No.:	58934
Synonymes:	no data available
CAS No.:	78-93-3
Other means of identification:	

### Relevant identified uses of the substance or mixture and uses advised against

Recommended Use:	For Further Manufacturing Use Only
Uses advised against:	Not for Human or Animal Drug Use

### Details of the supplier of the safety data sheet

*Canada*

### Supplier

#### **VWR International LLC**

Street	100 Matsonford Road Radnor Corporate Center, Building One, Suite 200 P. O. Box 6660
Postal code/city	Radnor, PA 19087
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## Manufacturer

### **VWR International Co.**

Street

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Postal code/city

Mississauga, Ontario, L5N 5Z7

### **Emergency telephone**

Telephone

+1-613-996-6666 (Canutec, 24 hrs/day, 7 days/week, Canada)

### **Preparation Information**

VWR International - Data Compliance

E-mail

sds@vwr.com

## SECTION 2: Hazards identification

### **2.1 Classification of the substance or mixture**

#### **Classification according to Hazardous Products Regulation (SOR/2015-17)**

Hazard classes and hazard categories	Hazard statements
Flammable liquid, category 2	H225
Eye irritation, category 2	H319
Specific target organ toxicity (single exposure), category 3, narcotic effect	H336

### **2.2 Label elements**

#### **Labelling in accordance with (SOR/2015-17)**

#### **Hazard pictograms**



**Signal word:** Danger

Hazard statements	
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.





Precautionary statements	
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

Other hazards

**Hazards not otherwise classified (HNOC)**

no data available

## SECTION 3: Composition / information on ingredients

### 3.1 Substances

Substance name	Methyl ethyl ketone
Molecular formula	C <sub>4</sub> H <sub>8</sub> O
Molecular weight	72.11 g/mol
CAS No.	78-93-3

## SECTION 4: First aid measures

### 4.1 General information

IF exposed or if you feel unwell: Call a POISON CENTER or doctor/physician. If unconscious place in recovery position and seek medical advice. Never give anything by mouth to an unconscious person or a person with cramps. Change contaminated, saturated clothing. Do not leave affected person unattended.

#### After inhalation

Call a POISON CENTER/doctor. Remove casualty to fresh air and keep warm and at rest. If breathing is irregular or stopped, administer artificial respiration.

#### In case of skin contact

After contact with skin, wash immediately with plenty of water and soap. Remove contaminated, saturated clothing immediately. In case of skin reactions, consult a physician.

#### After eye contact

In case of contact with eyes flush immediately with plenty of flowing water for 10 to 15 minutes holding eyelids apart and consult an ophthalmologist. Protect uninjured eye. Remove contact lenses, if present and easy to do. Continue rinsing.

#### In case of ingestion

If accidentally swallowed rinse the mouth with plenty of water (only if the person is conscious) and obtain immediate medical attention. Do NOT induce vomiting. Give nothing to eat or drink.

### 4.2 Most important symptoms/effects, acute and delayed

no data available

### 4.3 Indication of any immediate medical attention and special treatment needed

no data available





#### 4.4 Self-protection of the first aider

First aider: Pay attention to self-protection!

#### 4.5 Information to physician

no data available

### SECTION 5: Firefighting measures

#### 5.1 Extinguishing media

##### Suitable extinguishing media

Water spray

ABC-powder

Carbon dioxide (CO<sub>2</sub>)

Nitrogen

##### Extinguishing media which must not be used for safety reasons

no restriction

#### 5.2 Specific hazards arising from the chemical

In case of fire may be liberated:

Carbon dioxide (CO<sub>2</sub>)

Carbon monoxide

#### 5.3 Advice for firefighters

DO NOT fight fire when fire reaches explosives. In case of fire: Wear self-contained breathing apparatus.

#### 5.4 Additional information

Do not allow run-off from fire-fighting to enter drains or water courses. Do not inhale explosion and combustion gases. Use caution when applying carbon dioxide in confined spaces. Carbon dioxide can displace oxygen. Use water spray/stream to protect personnel and to cool endangered containers.

### SECTION 6: Accidental release measures

#### 6.1 Personal precautions, protective equipment and emergency procedures

In case of major fire and large quantities: Remove persons to safety.

#### 6.2 Environmental precautions

Discharge into the environment must be avoided.

#### 6.3 Methods and material for containment and cleaning up

Spilled product must never be returned to the original container for recycling. Collect in closed and suitable containers for disposal.

#### 6.4 Additional information

Clear spills immediately.





## SECTION 7: Handling and storage

### 7.1 Precautions for safe handling

Avoid: Inhalation Avoid contact with skin and eyes. Use extractor hood (laboratory). If handled uncovered, arrangements with local exhaust ventilation have to be used. If local exhaust ventilation is not possible or not sufficient, the entire working area must be ventilated by technical means. Keep away from sources of ignition. - No smoking. Usual measures for fire prevention. Take precautionary measures against static discharges.

### 7.2 Conditions for safe storage, including any incompatibilities

storage temperature: Ambient temperature

Storage class: 3

Keep container tightly closed in a cool, well-ventilated place. Keep/Store away from combustible materials.

### 7.3 Specific end use(s)

no data available

## SECTION 8: Exposure controls/personal protection

### 8.1 Control parameters

Ingredient (Designation)	Regulatory information	Country	Limit value type (country of origin)	Limit value
Methyl ethyl ketone	Gestis	CA	LTV	150 mg/m <sup>3</sup> - 50 ppm
Methyl ethyl ketone	Gestis	CA	STV	300 mg/m <sup>3</sup> - 100 ppm

### 8.2 Engineering controls

#### Appropriate engineering controls

Technical measures and the application of suitable work processes have priority over personal protection equipment. If handled uncovered, arrangements with local exhaust ventilation have to be used.

#### Personal protection equipment (PPE)

Wear suitable protective clothing. When handling with chemical substances, protective clothing must be worn.

#### *Eye/face protection*

Eye glasses with side protection

#### *Skin protection*

When handling with chemical substances, protective gloves must be worn. In the case of wanting to use the gloves again, clean them before taking off and air them well. Recommended glove articles





By short-term hand contact

Suitable material:	Butyl caoutchouc (butyl rubber)
Thickness of the glove material:	0,30 mm
Breakthrough time (maximum wearing time):	76 min

By long-term hand contact

Suitable material:	PE (polyethylene)
Thickness of the glove material:	-
Breakthrough time (maximum wearing time):	> 480 min

*Respiratory protection*

Respiratory protection necessary at: aerosol or mist formation If exposure limits are exceeded or irritation is experienced, NIOSH approved respiratory protection should be worn.

*Additional information*

Wash hands before breaks and after work. Avoid contact with skin and eyes. When using do not eat, drink or smoke. Provide eye shower and label its location conspicuously.

*Environmental exposure controls*

no data available





## SECTION 9: Physical and chemical properties

### 9.1 Information on basic physical and chemical properties

(a) Appearance	
Physical state:	liquid
Color:	colorless
(b) Odour:	no data available
(c) Odour threshold:	no data available

#### Safety relevant basic data

(d) pH:	5.5 (300 g/l; H <sub>2</sub> O; 20 °C)
(e) Melting point/freezing point:	-86 °C
(f) Initial boiling point and boiling range:	79.6 °C (1013 hPa)
(g) Flash point:	-4 °C (DIN 51755 Part 1)
(h) Evaporation rate:	no data available
(i) Flammability (solid, gas):	Highly flammable liquid and vapour.
(j) Flammability or explosive limits	
Lower explosion limit:	1.8 % (v/v)
Upper explosion limit:	12 % (v/v)
(k) Vapour pressure:	103 hPa (20 °C); 71 mmHg (20 °C)
(l) Vapour density:	2.41 (20 °C)
(m) Relative density:	no data available
(n) Solubility(ies)	
Water solubility (g/L):	292 g/l (20 °C)
Soluble (g/L) in Ethanol:	no data available
(o) Partition coefficient: n-octanol/water:	0.29 (20 °C)
(p) Auto-ignition temperature:	no data available
(q) Decomposition temperature:	no data available
(r) Viscosity	
Kinematic viscosity:	no data available
Dynamic viscosity:	0.4 mPa*s (20 °C)
(s) Explosive properties:	not applicable
(t) Oxidising properties:	not applicable

### 9.2 Other information

Bulk density:	not applicable
Refraction index:	1.3814 (589 nm; 20 °C)
Dissociation constant:	no data available
Surface tension:	no data available
Henry constant:	no data available

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

Vapours are heavier than air, spread along floors and form explosive mixtures with air.





## 10.2 Chemical stability

The product is chemically stable under standard ambient conditions (room temperature) .

## 10.3 Possibility of hazardous reactions

Formation of explosive mixtures with:

Oxidising agent, strong

Reducing agent, strong

Nitric acid

Trichloromethane

Peroxide

Violent reaction with:

Alkali (lye)

Oxidising agent

Reducing agent

Exothermic reaction with:

Bromine

Chlorine

## 10.4 Conditions to avoid

UV-radiation/sunlight

Heat

This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

## 10.5 Incompatible materials

Rubber articles

Plastic articles

## 10.6 Hazardous decomposition products

no data available

## 10.7 Additional information

no data available

# SECTION 11: Toxicological information

## 11.1 Information on toxicological effects

### Acute effects

*Acute oral toxicity:*

LD50: < 2600 mg/kg - Rat - (IUCLID)

*Acute dermal toxicity:*

LD50: < 8000 mg/kg - Rabbit - (Merck KGaA)

*Acute inhalation toxicity:*

LC50: 11700 ppm - Rat - (Japan GHS Basis for Classification Data)







**Irritant and corrosive effects**

*Primary irritation to the skin:*  
not applicable

*Irritation to eyes:*  
Causes serious eye irritation.

*Irritation to respiratory tract:*  
not applicable

**Respiratory or skin sensitization**

In case of skin contact: not sensitising  
After inhalation: not sensitising

**STOT-single exposure**

May cause drowsiness or dizziness.

**STOT-repeated exposure**

not applicable

**CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**

**Carcinogenicity**

The table below indicates whether each agency has listed any ingredient as a carcinogen.

no data available	ACGIH	IARC	NTP	OSHA

**Germ cell mutagenicity**

No indications of human germ cell mutagenicity exist.

**Reproductive toxicity**

No indications of human reproductive toxicity exist.

**Aspiration hazard**

not applicable

**Other adverse effects**

no data available





**Additional information**

no data available

## SECTION 12: Ecological information

### 12.1 Ecotoxicity

**Fish toxicity:**

no data available

**Daphnia toxicity:**

no data available

**Algae toxicity:**

no data available

**Bacteria toxicity:**

no data available

### 12.2 Persistence and degradability

no data available

### 12.3 Bioaccumulative potential

Partition coefficient: n-octanol/water: 0.29 (20 °C)

### 12.4 Mobility in soil:

no data available

### 12.5 Results of PBT/vPvB assessment

no data available

### 12.6 Other adverse effects

no data available

## SECTION 13: Disposal considerations

### 13.1 Waste treatment methods

**Appropriate disposal / Product**

Dispose according to legislation. Consult the appropriate local waste disposal expert about waste disposal.

Waste code product: 160508

**Appropriate disposal / Package**

Dispose according to legislation. Handle contaminated packages in the same way as the substance itself.

**Additional information**

no data available





## SECTION 14: Transport information

### Land transport (DOT)

UN-No.:	1193
Proper Shipping Name:	ETHYL METHYL KETONE
Class(es):	3
Classification code:	F1
Hazard label(s):	3
Packing group:	II
Environmental hazards:	No
Marine pollutant:	No
Special precautions for user:	

### Sea transport (IMDG)

UN-No.:	1193
Proper Shipping Name:	ETHYL METHYL KETONE
Class(es):	3
Classification code:	
Hazard label(s):	3
Packing group:	II
Environmental hazards:	No
MARINE POLLUTANT:	no data available
Special precautions for user:	
Segregation group:	-
EmS-No.	F-E S-D
Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code	not relevant





## Air transport (ICAO-TI / IATA-DGR)

UN-No.:	1193
Proper Shipping Name:	ETHYL METHYL KETONE
Class(es):	3
Classification code:	
Hazard label(s):	3
Packing group:	II
Special precautions for user:	

## SECTION 15: Regulatory information

### Safety, health and environmental regulations/legislation specific for the substance or mixture

Domestic Substance List:

## SECTION 16: Other information

### Abbreviations and acronyms

ACGIH - American Conference of Governmental Industrial Hygienists

DOT - Department of Transportation

IARC - International Agency for Research on Cancer

IATA-DGR - International Air Transport Association-Dangerous Goods Regulations

ICAO-TI - International Civil Aviation Organization-Technical Instructions

IMDG - International Maritime Code for Dangerous Goods

LTV - Long Term Value

NIOSH - National Institute for Occupational Safety and Health

NTP - National Toxicology Program

OSHA - Occupational Safety & Health Administration

PBT - Persistent, Bioaccumulative and Toxic

PEL - Permissible Exposure Limit

STV - Short Term Value

SVHC - Substances of Very High Concern

TLV - Threshold Limit Value

vPvB - very Persistent, very Bioaccumulative

ADR - European Agreement concerning the International Carriage of Dangerous Goods by Road

AGS - Committee on Hazardous Substances (Ausschuss für Gefahrstoffe)

CLP - Regulation on Classification, Labelling and Packaging of Substances and Mixtures

DFG - German Research Foundation (Deutsche Forschungsgemeinschaft)

Gestis - Information system on hazardous substances of the German Social Accident Insurance (Gefahrstoffinformationssystem der Deutschen Gesetzlichen Unfallversicherung)

RID - Regulation concerning the International Carriage of Dangerous Goods by Rail

### Additional information

Indication of changes: general update





*The above information is believed to be correct but does not purport to be all-inclusive and shall be used only as a guidance. The information in this document is based on the present state knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. VWR International and his Affiliates shall not be held liable for any damage resulting from handling.*

