



SIGMA-ALDRICH

Material Safety Data Sheet

Date Printed: 02/23/2001
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Version 1.10

Section 1 - Product and Company Information

Product Name	METHYL VINYL KETONE, 99%
Product Number	269549
Brand	Aldrich Chemical
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	St. Louis, MO 63103 US
Technical Phone:	314 771 5765
Fax:	800 325 5052
Emergency Phone:	414 273 3850 Ext.5996

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
3-BUTEN-2-ONE	76-94-4	Yes
Formula	C4H6O	
Synonyms	Acetone, methylene-, Acetyl ethylene, 3-Butene-2-one, Butenone, delta(sup 3)-2-Butenone, Ketone, methyl vinyl, Methylene acetone, Methyl-vinyl-cetone (French), Methylvinylketon (German), Methylvinyl ketone, gamma-Oxo-alpha-butylene, Vinyl methyl ketone	

Section 3 - Hazards Identification

Emergency Overview

Flammable (USA) Highly Flammable (EU), Highly Toxic (USA) Very Toxic (EU).
Highly flammable. Very toxic by inhalation, in contact with skin, and if swallowed. Causes burns.
Lachrymator.

HMIS Rating

Health: 3 Flammability: 3 Reactivity: 0

NFPA Rating

Health: 3 Flammability: 3 Reactivity: 0

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

Oral Exposure

If swallowed, wash out mouth with water provided person is conscious. Call a physician immediately.

Inhalation Exposure

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

Dermal Exposure

In case of skin contact, flush with copious amounts of water for at least 15 minutes. Remove contaminated clothing and shoes. Call a physician.

Eye Exposure

In case of contact with eyes, flush with copious amounts of water for at least 15 minutes. Assure adequate flushing by separating the eyelids with fingers. Call a physician.

Section 5 - Fire Fighting Measures

Flammable Hazards: Yes

Explosion Hazards

Vapor may travel considerable distance to source of ignition and flash back.
Container explosion may occur under fire conditions.

Flash Point: -44.6 °F -7 °C

Explosion Limits: Lower: 2.14 % Upper: 15.64 %

Autoignition Temp: N/A **Flammability:** Yes

Extinguishing Media

Suitable

Water spray, Carbon dioxide, dry chemical powder, or appropriate foam.

Firefighting

Protective Equipment

Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s)

Flammable liquid. Emits toxic fumes under fire conditions.

Section 6 - Accidental Release Measures

Procedure to be Followed in Case of Leak or Spill

Evacuate area. Shut off all sources of ignition.

Procedure(s) of Personal Precaution(s)

Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

Methods for Cleaning Up

Cover with dry-lime, sand, or soda ash. Place in covered containers using non-sparking tools and transport outdoors. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

Handling

User Exposure

Do not breathe vapor. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

Storage

Suitable

Keep tightly closed. Keep away from heat, sparks, and open flame. Refrigerate.

Section 8 - Exposure Controls / PPE

Engineering Controls

Safety shower and eye bath. Use nonsparking tools. Use only in a chemical fume hood.

Personal Protective Equipment

Respiratory

NIOSH/MSHA-approved respirator.

Hand

Compatible chemical-resistant gloves.

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Eye

Chemical safety goggles.

General Hygiene Measures

Wash contaminated clothing before reuse. Wash thoroughly after handling.

Section 9 - Physical/Chemical Properties

Appearance	
Physical State	Color
Clear liquid	Faintly yellow

Molecular Weight:	70.09 AMU
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Property	Value	At Temperature or Pressure
pH	N/A	
BP/BP Range	32 - 34 °C	60 mmHg
MP/MP Range	N/A	
Freezing Point	N/A	
Vapor Pressure	71 mmHg	20 °C
Vapor Density	1.3 g/l	
Saturated Vapor Conc.	N/A	
SG/Density	0.855 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	< 5 %	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point °F	-44.6 °F	
Flash Point °C	-7 °C	
Explosion Limits	Lower: 2.14 % Upper: 15.64 %	
Autoignition Temp	N/A	
Refractive Index	1.411	
Solubility	N/A	

Section 10 - Stability and Reactivity**Stability****Conditions of Instability**

Heat-sensitive Light sensitive

Materials to Avoid

Strong bases, Strong oxidizing agents, Strong reducing agents.

Hazardous Decomposition Products**Hazardous Decomposition Products**

Carbon monoxide, Carbon dioxide.

Hazardous Polymerization**Hazardous Polymerization**

Will not occur.

Section 11 - Toxicological Information**Route of Exposure****Skin Contact**

Causes burns.

Skin Absorption

May be harmful if absorbed through the skin.

Eye Contact

Causes burns.

Inhalation

May be fatal if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.

Ingestion

May be fatal if swallowed.

Signs and Symptoms of Exposure

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin. Inhalation may result in spasm, inflammation and edema of the larynx and bronchi, chemical pneumonitis, and pulmonary edema. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea, and vomiting. To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

RTECS Number: EM9800000**Toxicity Data**

Oral - Rat: 23.1 mg/kg (LD50)

Inhalation - Rat: 7 mg/m3 (LC50)

Oral - Mouse: 23.3 mg/kg (LD50)

Inhalation - Mouse: 8 mg/m3 (LC50)

Intraperitoneal - Mouse: 76 MG/KG (LD50)

Section 12 - Ecological Information**Section 13 - Disposal Considerations****Appropriate Method of Disposal of Substance or Preparation**

Contact a licensed professional waste disposal service to dispose of this material.

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.

Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information**DOT****Proper Shipping Name:** Methyl vinyl ketone, stabilized**UN#:** 1251**Class:** 6.1**Packing Group:** Packing Group I**PIH:** Zone A**IATA****Proper Shipping Name:** Methyl vinyl ketone, stabilized**IATA Number:** 1251**Hazard Class:** 6.1**Packing Group:** II

Section 15 - Regulatory Information

EU Additional Classification

Symbol of Danger: F T+

Indication of Danger

Highly Flammable. Very toxic.

Risk Statements R: 11 26/28 34

Highly flammable. Very toxic by inhalation and if swallowed. Causes burns.

Safety Statements S: 16 26 28 36/37/39 45

Keep away from sources of ignition - no smoking. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. After contact with skin, wash immediately with plenty of water. Wear suitable protective clothing, gloves, and eye/face protection. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible).

US Classification and Label Text

Indication of Danger

Flammable (USA) Highly Flammable (EU). Highly Toxic (USA) Very Toxic (EU).

Risk Statements

Highly flammable. Very toxic by inhalation, in contact with skin, and if swallowed. Causes burns.

Safety Statements

Keep away from sources of ignition - no smoking. In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible). In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Wear suitable protective clothing, gloves, and eye/face protection.

US Statements

Lachrymator.

United States Regulatory Information

Listed: Yes

Notes: This product is subject to SARA section 313 reporting requirements. This product is subject to SARA section 313 reporting requirements.

TSCA Inventory Item: Yes

Section 16 - Other Information

Warranty

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2001 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.