



**ALDON CORPORATION**

# MATERIAL SAFETY DATA SHEET

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MSDS No. MM 405  
Effective Date March 29, 1999

## SECTION V HEALTH HAZARD DATA

MM 405

**Threshold Limited Value** RTECS No. EL6475000 Toxicity data: Ori-rat LD50: 2737 mg/kg, ihl-hmn TCL0: 100 ppm/5 m. TWA: 200 ppm, 590 mg/m<sup>3</sup>; STEL: 300 ppm, 885 mg/m<sup>3</sup> (ACGIH 1992-93).

**Effects of Overexposure** **TARGET ORGANS AFFECTED:** Liver, kidneys, central nervous system. **INHALATION:** Vapors of this material irritate the eyes, nose and throat. Exposure to high concentrations will produce headache, dizziness and in extreme cases, unconsciousness, since this material is a central nervous system depressant. **SKIN:** Prolonged or repeated contact with the skin can produce irritation and dermatitis. **INGESTION:** Moderately toxic. May cause irritation of the mouth, throat, esophagus with nausea, abdominal discomfort, vomiting, diarrhea, dizziness. Aspiration into the lungs may occur during vomiting resulting in lung injury. **EYES:** May cause damage.

**Emergency and First Aid Procedures** **SKIN:** Wash area of contact with soap and water. Remove contaminated clothing immediately. If irritation persists, get medical attention. **EYES:** Immediately flush with plenty of water for 15 minutes, lifting lower and upper eyelids occasionally. Get immediate medical attention. **INHALATION:** Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. **INGESTION:** If swallowed, do NOT induce vomiting. Get immediate medical attention. If vomiting occurs keep head lower than hips to prevent aspiration. Never give anything by mouth to an unconscious person.

## SECTION VI REACTIVITY DATA

<b>Stability</b>	<b>Unstable</b>		<b>Conditions to Avoid</b>	Highly flammable. Keep away from sparks, open flames, hot surfaces, all sources of heat and ignition.
	<b>Stable</b>	X		

**Incompatibility (Materials to Avoid)** Strong oxidizing agents can cause spontaneous ignition and violent reaction. Ignition on reaction with potassium t-butoxide. This solvent can attack many plastics, resins and rubber. Avoid mineral acids and halogens.

**Hazardous Decomposition Products** Burning can produce carbon monoxide and/or carbon dioxide.

<b>Hazardous Polymerization</b>	<b>Conditions to Avoid</b>	
	<b>May Occur</b>	<b>Will Not Occur</b>
		X

Not applicable.

## SECTION VII SPILL OR LEAK PROCEDURES

**Steps to be taken in case material is released or spilled** Extinguish and do not turn on any ignition source until area is determined to be free from explosion or fire hazards. Collect large spills for disposal. Flush small spills with water.

**Waste Disposal Method** Discharge, treatment, or disposal may be subject to Federal, State or Local laws. These disposal guidelines are intended for the disposal of catalog-size quantities only. Incinerate in a furnace where permitted under Federal, State and local regulations. At very low concentrations in water, this product is readily biodegradable in a biological wastewater treatment plant.

## SECTION VIII SPECIAL PROTECTION INFORMATION

**Respiration Protection (Specify Type)** In the laboratory work in fume hood or wear a NIOSH/MSHA-approved respirator. Exhaust fans and other electrical services must be of explosion-proof construction.

<b>Ventilation</b>	<b>Local Exhaust</b>	Yes.	<b>Special</b>	No.
	<b>Mechanical (General)</b>	Yes.	<b>Other</b>	Adequate to maintain below exposure limit.

<b>Protective Gloves</b>	Neoprene, rubber.	<b>Eye Protection</b>	Chemical safety glasses.
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**Other Protective Equipment** Goggles, smock, apron, eye wash station, ventilation hood, proper gloves, fire extinguisher.

## SECTION IX SPECIAL PRECAUTIONS

**Precautions to be Taken in Handling & Storing** Store in a cool, dry, well-ventilated area away from strong oxidizing agents and fire hazards. Wash thoroughly after handling. Keep container tightly closed when not in use.

**Other Precautions** Read label on container before using. Do not wear contact lenses when working with chemicals. Store in a room for storing flammable solvents. All containers should be grounded when pouring this solvent. Avoid breathing vapors. Use with adequate ventilation. Avoid contact with skin, eyes and clothing. Remove and wash contaminated clothing.

For laboratory use only. Not for drug, food or household use. Keep out of reach of children.

<b>Revision</b> No. 4	<b>Date</b> 3/29/99	<b>Approved</b> Michael Raszeja	<b>Chemical Safety Coordinator</b> MR
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The information contained herein is furnished without warranty of any kind. Employers should use this information only as a supplement to other information gathered by them and must make independent determinations of suitability and completeness of information from all sources to assure proper use of these materials and the safety and health of employees. \* Hazardous Materials Industrial Standards. Printed on recycled paper.

## SECTION I NAME 24 HOUR EMERGENCY ASSISTANCE

<b>Product</b>	METHYL ETHYL KETONE
<b>Chemical Synonyms</b>	2-Butanone, MEK, Butanone
<b>Formula</b>	CH <sub>3</sub> COCH <sub>2</sub> CH <sub>3</sub>
<b>Unit Size</b>	up to 5 gal.
<b>C.A.S. No.</b>	78-93-3

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**CHEMTREC**  
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<b>Health</b>	2
<b>Fire</b>	3
<b>Reactivity</b>	2

**NFPA HAZARD RATING**

LEAST	SLIGHT	MODERATE	HIGH	EXTREME
0	1	2	3	4

**HMIS \***

1	2	3	4
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## SECTION II INGREDIENTS OF MIXTURES

Principal Component(s)	%	TLV Units
Methyl Ethyl Ketone	100%	See Section V.

**DANGER! EXTREMELY FLAMMABLE! HARMFUL IF SWALLOWED.**

**CAUSES SKIN AND EYE IRRITATION. VAPOR HARMFUL.**

## SECTION III PHYSICAL DATA

Melting Point (°F)	Solidifies -86°C (-122°F)	Specific Gravity (H <sub>2</sub> O = 1)	0.804-0.806
Boiling Point (°F)	79.5°C (176°F)	Percent Volatile by Volume (%)	100%
Vapor Pressure (mm Hg)	100 mm at 25°C	Evaporation Rate (n-Butyl Acetate =1)	2.7
Vapor Density (Air=1)	2.5		
Solubility in Water	Appreciable.		
Appearance & Odor	Colorless mobile liquid; pungent odor.		

## SECTION IV FIRE AND EXPLOSION HAZARD DATA

<b>Flash Point (Method Used)</b>	-9°F (16°C) CC	<b>Flammable Limits in Air % by Volume @ 200°F</b>	Lower 1.4	Upper 11.4
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**Extinguisher Media** "Alcohol" foam; carbon dioxide (CO<sub>2</sub>); dry chemical (ABC); water fog.

**SPECIAL FIREFIGHTING PROCEDURES** (OSHA Class 1B) Flammable Liquid.

Wear a NIOSH/MSHA-approved self-contained breathing apparatus and full protective clothing. Water may be ineffective. A stream of water can scatter flames. Use a water spray to cool fire-exposed metal containers.

Autoignition Temperature: 515°C (960°F).

## UNUSUAL FIRE AND EXPLOSION HAZARDS

This volatile liquid can readily form explosive or flammable mixture with air. Vapors are heavier than air and can flow along surfaces to distant ignition sources and flash back. Fire or excessive heat may produce hazardous decomposition products; can react vigorously with oxidizing materials.

(1996 EMERGENCY RESPONSE GUIDEBOOK, DOT P 5800.7, GUIDE PAGE NO. 127)

D.O.T. METHYL ETHYL KETONE, 3, UN 1193, PG II

Approved by U.S. Department of Labor "essentially similar" to form OSHA-20