



Date:	01/01/88	MSDS No:
Supersedes:		
Trade Name:		
Sizes:	All	

MATERIAL SAFETY DATA SHEET

SECTION I - IDENTIFICATION

Manufacturer/Supplier: Dial Manufacturing, Inc. 25 S. 51st Avenue Phoenix, Arizona 85043 Tel. No.: (602) 278-1100	Product Name: METHYL ETHYL KETONE
	Product Number: 4674 and 4689

SECTION II - HAZARDOUS MATERIALS

Chemical Name:	Methyl Ethyl Keton	Special Hazard			
		Designations::	HMIS	NFPA	KEY
Chemical Family:	Ketone	Health:	2	1	0-Minimal
Formula:	CH ₃ COCH ₂ CH ₃	Flammability:	3	3	1-Slight
Molecular Weight:	72	Reactivity:	0	0	2-Moderate
CAS Number:	78-93-3	Personal Protective	G	--	3-Serious
CAS Name:	2-Butanone	Equipment:			4-Severe
Synonyms:	2-Butanone; MEK; Ethyl Methyl Ketone; Methyl Acetone; Butanone-2	OSHA 29CFR1910.1200	Evaluation:	Hazardous	

SECTION III - PHYSICAL DATA

Boiling Range: (750mmHg) 79.6°C / 175°F	Solubility in Water: (% by wt (a200(a20°C): 26.8
Freezing Point: -86.7°C / -124°F	% Volatile by Volume: 100%
Specific Gravity: H ₂ O = 1 (a20/20°C): 0.8062	Evaporation Rate: (BuAc = 1): 5.7
Vapor Pressure: (20°C): 77.5 mm Hg	Appearance and Odor: Clear, colorless, mobile liquid with strong characteristic "ketone" odor
Vapor Density: (Air = 1 (a20°C): 2.5	

SECTION IV - FIRE AND EXPLOSTION HAZARD DATA

Flash Point (test method):	Flammable limits in air, % by volume: Upper: 11.0
Tag open cup (ASTM D1310): 30°F / -1°C	Lower: 2.0
Tag closed cup (ASTM D56): 20°F / -7°C	
Extinguishing Media:	Use CO ₂ or dry chemical for small fires, alcohol-type aqueous film-forming foam or water spray for large fires. Water may be ineffective but should be used to cool fire-exposed structures and vessels.
Unusual Fire and Explosion Hazards:	Vapor is heavier than air and can travel considerable distance to a source of ignition and flashback. Material creates a special hazard because it floats on water.
Special Fire Fighting Procedures:	Wear self-contained breathing apparatus (SCBA) and complete personal protective equipment when potential for exposure to vapors or products of combustion exists. Water spray can be used to reduce intensity of flames and to dilute spills to nonflammable mixture.

SECTION V - HEALTH HAZARD DATA

Permissible Exposure Limits:	OSHA standard: 200 ppm, 8-hr TWA; ACGIH TLV: 200 ppm, 8-hr TWA; 300ppm, 15-min STEL
Immediately Dangerous to Life and Health Level:	3000 ppm
Effects of Exposure/Toxicity Date (Acute):	
Ingestion (swallowing):	Can cause mental sluggishness. Slightly toxic to animals (oral LD50, rats: 4.8 g/kg.)
Inhalation (breathing):	Causes irritation of nasal passages and throat. Causes stupor (central nervous system depression). Slightly toxic to animals (inhalation LCLo, rats, 4 Hrs: 2000 ppm). Can cause moderate skin injury (reddening and swelling). Repeated or prolonged contact can cause drying of skin, also dermatitis. Slightly toxic to animals by absorption (dermal LD50, rabbits: 13 g/kg).
Skin contact:	
Eye contact:	Liquid and vapors are irritating to eyes. Can cause severe injury -- damage reversible.

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Effects of Exposure/Toxicity Date (Chronic):**Mutagenicity:**

In vitro, no information. In vivo, no information.

Carcinogenicity:

No information

Reproduction:

No evidence of reproductive effects.

SECTION VI – EMERGENCY AND FIRST AID PROCEDURES

Ingestion (swallowing):	Do not induce vomiting. Immediately give two glasses of water or milk. Contact a physician immediately.
Inhalation (breathing):	Remove patient from contaminated area. If breathing has stopped, give artificial respiration, then oxygen if needed. Contact a physician immediately.
Skin contact:	Remove contaminated clothing and wash contaminated skin with large amounts of water. If irritation persists, contact a physician.
Eye contact:	Flush eyes with water for at least 15 minutes. Contact a physician immediately.

SECTION VII – HAZARDOUS REACTIVITY DATA

Stability:	Stable
Hazardous Polymerization:	Will not occur
Materials to Avoid:	Caustic soda and other strong alkalis: hydrochloric, sulfuric and other strong inorganic acids; amines; oxidizing agents such as hydrogen peroxide, nitric acid, perchloric acid or chromium trioxide.
Hazardous Combustion or Decomposition Products::	Carbon monoxide
Conditions to Avoid:	Heat, sparks and flame

SECTION VIII – SPILL OR LEAK PROCEDURES

Steps to be taken in case material is released or spilled:	Eliminate ignition sources. Avoid eye or skin contact. Place leaking containers in well-ventilated area. If fire potential exists, blanket spill with foam or use water spray to disperse vapors. Contain spill to minimize contaminated area and facilitate salvage or disposal. To clean up spill, flush area sparingly with water or use an absorbent. Avoid runoff into storm sewers and ditches which lead to natural waterways. Call the National Response Center (800-424-8802) if spill is equal to or greater than reportable quantity (5000 lb/day) under “Superfund”. If required, state and local authorities should be notified.
Waste Disposal Method:	This product, when spilled or disposed, is a hazardous solid waste as defined in Resource Conservation Recovery Act regulations (40CFR261). Preferred method is incineration or biological treatment in federal/state approved facility

SECTION IX – SPECIAL PROTECTION INFORMATION

Respiratory Protection:	Use full-face NIOSH-approved organic vapor cartridge or canister respirator within use limitations of these devices; in all other situations, use self-contained breathing apparatus (SCBA).
Ventilation:	Local exhaust: Recommended when appropriate to control employee exposure.
Mechanical (general):	Not recommended as the sole means of controlling employee exposure.
Protective Gloves:	Neoprene or rubber.
Eye Protection:	Chemical safety goggles.
Other Protective Equipment:	For operations where spills or splashing can occur, use impervious body covering and boots. A safety shower and eye bath should be available

SECTION X – SPECIAL PRECAUTIONS

Precautions To Be Taken In Handling and Storing:	Store in a cool, well-ventilated area. Keep away from heat, sparks and flame. Keep containers closed. Use spark-resistant tools. When transferring follow proper grounding procedures. Use with adequate ventilation. Avoid breathing vapor. Avoid contact with eyes, skin and clothing. Wash thoroughly with soap and water after handling. Wash contaminated clothing thoroughly before re-use. Discard contaminated leather clothing.
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SECTION XI – TRANSPORTATION DATA

Shipping Name:	Methyl Ethyl Ketone
Hazard Class:	Flammable Liquid
United Nations Number:	UN 1193
DOT Emergency Response Guide No.	26