



Centre Anti-Poison pour le Québec: (800) 463-5060

Tél. (Qc): (418) 660-8666 / 800-890-8666


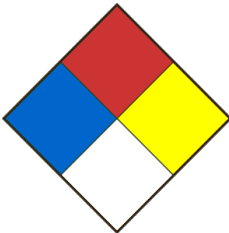
Fax. (Qc): (418) 660-8998

## SAFETY DATA SHEET

### SECTION 01 - PRODUCT AND COMPANY IDENTIFICATION

Product Identifier 2-BUTANONE		Product Use Laboratory use	
Chemical formula CH <sub>3</sub> COCH <sub>2</sub> CH <sub>3</sub>		Product code BR-0163	Molar weight 72,11
Chemical name / Commercial name / Synonymous 2-BUTANONE, METHYL ETHYL KETONE, ETHYL METHYL KETONE, METHYL ACETONE, 2-OXOBUTANE, MEK			
Supplier's name Laboratoire MAT		Address-Street 610, Adanac Street	
City Québec		Province Québec	
Postal code G1C 7B7	Internet www.labmat.com	Phone number 418-660-8666 / 800-890-8666	
Emergency phone	CANUTEC: 613-996-6666		CENTRE ANTI-POISON DU QUÉBEC 800-463-5060
Date SDS 10/2/2018	SDS Prepared by Laboratoire MAT	E-Mail labmat@labmat.com	

## SECTION 02 - HAZARDS IDENTIFICATION

<b>Classification WHIMS / GHS</b>	Flammable liquids category 2 Serious eye damage/eye irritation - Eye irritation category 1A Specific target organ toxicity - Single exposure category 3
<b>Signal Word</b>	DANGER
<b>Hazards statements (H)</b>	H225 Highly flammable liquid and vapour. H319 Causes serious eye irritation. H336 May cause drowsiness or dizziness.
<b>Precautionary statements (P)</b>	P210 Keep away from heat/sparks/open flames/hot surfaces. — No smoking. P233 Keep container tightly closed. P240 Ground/bond container and receiving equipment. P241 Use explosion-proof electrical/ventilating/lighting equipment. P242 Use only non-sparking tools. P243 Take precautionary measures against static discharge. P264 Wash the areas of the body that have been in contact with the product after handling. P280 Wear protective gloves/protective clothing/eye protection/face protection. P303 + P361 + P353 IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. P312 Call a POISON CENTER or doctor/physician if you feel unwell. P370 + P378 In case of fire: Use appropriate extinction agent for extinction. P403 + P235 Store in a well-ventilated place. Keep cool. P501 Dispose of contents/container in accordance with local / regional / national / international regulations or contact a specialist waste disposal company. P261 Avoid breathing dust / fume / gas / mist / vapours / spray. P271 Use only outdoors or in a well-ventilated area. P304 + P340 IF INHALED: Remove victim to fresh air and keep at rest in a position 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. P337 + P313 If eye irritation persists: Get medical advice/attention. P403 + P233 Store in a well-ventilated place. Keep container tightly closed. P405 Store locked up.
<b>PICTOGRAMS</b>	
<b>Other dangers</b>	NFPA (Risk: 0=No risk; 1=Slight; 2=Moderate; 3=Signifiant; 4=Extreme)
	<b>Health</b> 1 <b>Fire</b> 4 <b>Reactivity</b> 0 <b>Special danger</b>

## SECTION 03 - COMPOSITION/INFORMATION ON INGREDIENTS

Ingrédients (Dénomination chimique / synonymes)	Numéro CAS et tout identificateur unique	Concentration (%)
Méthyle éthyle cétone	78-93-3	<=100

## SECTION 04 - FIRST AID MEASURES

<b>Eye contact</b>	Wash eyes with large amounts of water for at least 15 minutes while holding eyelids apart to rinse eyes. If irritation persists, seek medical attention.
<b>Skin contact</b>	Wash skin with plenty of water for at least 15 minutes. Remove soiled clothing. If irritation persists, seek medical attention.
<b>Inhalation</b>	Move the unwell person to the fresh air. If breathing is difficult, give oxygen. Consult a physician.
<b>Ingestion</b>	If the person is conscious, give water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Consult a physician.
<b>Most important symptoms and effects (acute and delayed)</b>	Ref. section 11.
<b>Immediate medical attention and special treatment, if necessary</b>	In case of medical consultation, keep this sheet available.
<b>General advice</b>	Show this safety data sheet to the doctor in attendance.

## SECTION 05 - FIREFIGHTING MEASURES

<b>Flammability</b>	Yes
<b>Ignition conditions</b>	Heat, sparks and open flame. Flammable in the presence of a source of ignition when the temperature is above the flash point. Keep away from heat/sparks/open flame/hot surface. No smoking.
<b>Suitable extinguishing media</b>	Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. The water spray will then be used to cool nearby containers.
<b>Unsuitable extinguishing media</b>	Do not use a heavy water stream. The water could be ineffective.
<b>Dangerous fumes - combustion</b>	When heated to decomposition, the product emits toxic fumes:
<b>Hazardous combustion products</b>	Chlorine Hazardous decomposition products formed under fire conditions. Carbon oxides.
<b>Special fire and explosion hazards</b>	Steam can travel a great distance and ignite on sources of ignition such as heaters, electrical appliances, cigarettes, sparks, etc. Containers exposed to fire may explode. Vapors may form flammable or explosive mixtures with air. Methyl ethyl ketone may react with potassium tert-butoxide (inflammation), strong oxidizing agents (chromic acid, nitric acid, hydrogen peroxide), chlorinated hydrocarbons (trichloromethane) and strong bases (potassium hydroxide, hydroxide sodium). The combined effect of methyl ethyl ketone, hydrogen peroxide and nitric acid produces an explosive compound that is sensitive to friction and heat. Mixing methyl ethyl ketone with 2-propanol may produce explosive peroxides if stored for too long. A violent reaction may occur in the presence of chloroform and alkali metals. May react violently with incompatible products (Ref Section 10).
<b>Special protective equipment and precautions for firefighters</b>	Discard incompatible substances if this can be done without risk. Firefighters should be equipped with standard protective equipment, fireproof clothing, face mask, gloves, protective boots and, where appropriate, self-contained breathing apparatus.

## SECTION 06 - ACCIDENTAL RELEASE MEASURES

<b>Methods and materials for containment and cleaning up / Personnel precautions, protective equipment</b>	Evacuate personnel to safe areas. Remove all sources of ignition. Dilute residues with water, clean and rinse. Ensure a good ventilation of the premises. When handling, wear appropriate safety equipment. Use a respirator as needed. Avoid breathing vapours, mist or gas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. Dispose of residues in a container provided for the disposal of hazardous materials.
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## SECTION 07 - HANDLING AND STORAGE

<b>Conditions for safe storage</b>	Store in a cool, dry place. Keep container tightly closed and store away from incompatible products, heat, sparks, and open flame. Use venting and electrical equipment that is grounded and does not produce ignition sources (sparks). Protect from the sun's rays. Keep container tightly closed in a dry and well-ventilated place. Hygroscopic. Store in a well-ventilated area.
<b>Methods of handling</b>	Bottle in the glass only. NOTE: may attack some plastics. Always open containers slowly to allow any excess pressure to vent. Avoid inhalation of vapour or mist. Use explosion-proof equipment. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge.

## SECTION 08 - EXPOSURE CONTROLS/PERSONAL PROTECTION

### Workplace control parameters

Components	CAS-No.	Value	Control parameters	Basis
Ethyl methyl ketone	78-93-3	TWA	200.000000 ppm 590.000000 mg/m <sup>3</sup>	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		STEL	300.000000 ppm 885.000000 mg/m <sup>3</sup>	Canada. Alberta, Occupational Health and Safety Code (table 2: OEL)
		TWA	50.000000 ppm	Canada. British Columbia OEL
		STEL	100.000000 ppm	Canada. British Columbia OEL
		TWAEV	50.000000 ppm 150.000000 mg/m <sup>3</sup>	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		STEV	100.000000 ppm 300.000000 mg/m <sup>3</sup>	Québec. Regulation respecting occupational health and safety, Schedule 1, Part 1: Permissible exposure values for airborne contaminants
		TWA	200.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)
		STEL	300.000000 ppm	USA. ACGIH Threshold Limit Values (TLV)

<b>Data source</b>	Sigma-Aldrich.
<b>Ventilation</b>	Fan.
<b>Respiratory</b>	If the permissible levels are exceeded, use a mechanical filter / cartridge against NIOSH vapors or a respirator with air supply.
<b>Gloves</b>	Handle with gloves.
<b>Eyes</b>	Safety goggles with safety shutters.
<b>Shoes</b>	Safety shoes.
<b>Clothing</b>	Labcoat.
<b>Engineering control</b>	Have safety showers and eyewash stations in the workplace in case of an emergency and a ventilation system to maintain the level of concentrations in the air below the exposure limit values.

## SECTION 09 - PHYSICAL AND CHEMICAL PROPERTIES

<b>Physical state</b>	Liquid.
<b>Appearance</b>	Incolore-
<b>Odour</b>	une forte odeur sucrée.
<b>Odour threshold</b>	Data not available
<b>pH</b>	Donnée non disponible.
<b>Melting point / Freezing point</b>	-86°C
<b>Initial boiling point</b>	79°C
<b>Boiling range</b>	Data not available
<b>Flash point</b>	-9 @ -6°C
<b>Evaporation rate</b>	3.7-
<b>Flammability</b>	Yes
<b>Lower flammable / Explosive limit</b>	11,4% v/v
<b>Upper flammable / Explosive limit</b>	1,4% v/v
<b>Vapour pressure</b>	10.4 - 12.6 kPa @ 20 - 25 °C-
<b>Vapour density</b>	Data not available
<b>Relative density</b>	0.81 g/ml
<b>Solubility</b>	Miscible avec l'eau (27.5%), l'alcool et l'éther.
<b>Partition coefficient water/n-octanol</b>	log Pow : 0.29-
<b>Auto-ignition temperature</b>	404°C
<b>Decomposition temperature</b>	Data not available
<b>Viscosity</b>	0.249 - 0.72mpas

## SECTION 10 - STABILITY AND REACTIVITY

<b>Reactivity</b>	Non-reactive under normal conditions.
<b>Chemical stability</b>	Stable under recommended storage conditions.
<b>Possibility of hazardous reactions</b>	Vapours may form explosive mixture with air.
<b>Conditions of instability (Including sensitivity to shock / static discharge / vibration)</b>	Avoid excessive heat. Heat, flames, sparks. Avoid moisture. Avoid the accumulation of static electricity.
<b>Incompatible material</b>	Strong oxidizing agents (nitric acid, perchloric acid, peroxides, chlorates and perchlorates), strong reducing agents (potassium, sodium, hydrides of metals), aldehydes, amines and alkanolamines, ammonia, strong bases, strong oxidants, chlorinated hydrocarbons, oleum, potassium tert-butoxide, 2-propanol, heat and moisture.
<b>Materials to avoid</b>	Oxidizing agents, Strong reducing agents.
<b>Hazardous decomposition products</b>	Hazardous decomposition products formed under fire conditions. Carbon oxides.

## SECTION 11 - TOXICOLOGICAL INFORMATION

### 2-BUTANONE

<b>Routes of exposure</b>	Ingestion, inhalation, skin and eyes.
<b>Acute exposition effects / symptoms:</b>	By exposure route below.
<b>- Eyes</b>	Irritation and may result in reversible opacification of the cornea.
<b>- Skin</b>	Irritation and dermatitis.
<b>- Inhalation</b>	Irritation of the mucous membranes and respiratory tract. Narcotic effects, chest pain, cough, dyspnea, headache, dizziness, drowsiness, paresthesia, nystagmus, convulsions, nausea and vomiting.
<b>Acute toxicity (Ingestion)</b>	Irritation of the mucous membranes. Gastrointestinal disorders, narcotic effects, liver and kidney damage, cramps, diarrhea, headache, dizziness, drowsiness, paresthesia, nystagmus, convulsions, nausea and vomiting.
<b>Chronic exposure effects / symptoms</b>	Burning sensation, dermatitis, conjunctivitis, narcotic effects, skin allergies, chest pain, cough, dyspnea, headache, dizziness, drowsiness, confusion, irritability, paresthesia, nystagmus, fatigue, nausea and vomiting.
<b>DL50 (specify species and route of entry)</b>	LD50 Oral - Rat - 2737 mg/kg. LD50 Dermal - Rabbit - 5000 mg/kg.
<b>CL50 (specify species and route of entry)</b>	LC50 Inhalation - Rat - 4h - 11700 ppm.

## SECTION 12 - ECOLOGICAL INFORMATION

<b>Ecotoxicity</b>	Toxicity to fish: Mortality NOEC - <i>Cyprinodon variegatus</i> (sheepshead minnow) - 400 mg/l - 96 h. LC50 - <i>Pimephales promelas</i> (fathead minnow) - 3 130 - 3 320 mg/l - 96 h. Toxicity to daphnia and other aquatic invertebrates: LC50 - <i>Daphnia magna</i> (Water flea) - > 520 mg/l - 48 h. EC50 - <i>Daphnia magna</i> (Water flea) - 7 060 mg/l - 24 h.
<b>Persistence and degradability</b>	Data not available.
<b>Bioaccumulative potential</b>	Data not available.
<b>Mobility in soil</b>	Data not available.
<b>Other adverse effects</b>	Data not available.

## SECTION 13 - DISPOSAL CONSIDERATIONS

<b>Waste Disposal Method</b>	Dispose of contents / container in accordance with local / regional / national / international regulations / or contact a specialist waste disposal company.
<b>Contaminated Packaging</b>	Dispose of as unused product.

## SECTION 14 - TRANSPORT INFORMATION

UN Number	1193
UN Proper shipping name	ÉTHYLMÉTHYLCÉTONE ou MÉTHYLÉTHYLCÉTONE
Transport hazard class(es)	3 Flammable liquids
Packing group	II
Limited quantity index	1L
ERAP Index	-
Special precautions	-

## SECTION 15 - REGULATORY INFORMATION

WHIMS CANADA	Flammable liquids category 2 Serious eye damage/eye irritation - Eye irritation category 1A Specific target organ toxicity - Single exposure category 3
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## SECTION 16 - OTHER INFORMATION

### Further information

The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. It does not represent any guarantee of the properties of the product. Laboratoire MAT Inc. shall not be held liable for any damage resulting from handling or from contact with the above product.

Last Update: 10/2/2018