

Methyl Amyl Ketone

SECTION 1. IDENTIFICATION

Product Identifier	Methyl Amyl Ketone
Other Means of Identification	2-Heptanone, Butylacetone, MAK
Product Code(s)	ME2710
Product Family	Organic solution
Recommended Use	Laboratory and industrial use.
Restrictions on Use	None known.
Supplier Identifier	Alphachem Limited, 2485 Milltower Court, Mississauga, Ontario, L5N 5Z6, (905) 821-2995
Emergency Phone No.	CANUTEC CANADA, 613-996-6666, 24 Hours
SDS No.	0666

SECTION 2. HAZARD IDENTIFICATION

Classified according to Canada's Hazardous Products Regulations (WHMIS 2015) and the US Hazard Communication Standard (HCS 2012).

Classification

Flammable liquid - Category 3; Acute toxicity (Oral) - Category 4; Specific target organ toxicity (single exposure) - Category 3

Label Elements



Signal Word:
Danger

Hazard Statement(s):

Flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

Precautionary Statement(s):

Keep away from heat/sparks/open flames/hot surfaces. – No smoking.
Keep container tightly closed.
Ground and bond container and receiving equipment.
Use explosion-proof electrical, ventilating, and lighting equipment.
Use only non-sparking tools.
Take precautionary measures against static discharge.
Avoid breathing dust/fume/gas/mist/vapours/spray.
Use only outdoors or in a well-ventilated area.
Wear protective gloves/protective clothing/eye protection/face protection.

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Response:

IF ON SKIN: Wash with plenty of water.

IF INHALED: Remove person to fresh air and keep comfortable for breathing.

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

IF exposed or concerned: Get medical advice or attention.

Storage:

Store in a well-ventilated place.

Store locked up.

Disposal:

Dispose of contents and container in accordance with local, regional, national and international regulations.

Other Hazards

None known.

SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Substance:

Chemical Name	CAS No.	%	Other Identifiers
Methyl amyl ketone	110-43-0	> 99	2-Heptanone, Butylacetone, MAK

SECTION 4. FIRST-AID MEASURES

First-aid Measures

Inhalation

Remove source of exposure or move to fresh air. Call a Poison Centre or doctor if you feel unwell.

Skin Contact

Immediately wash gently and thoroughly with lukewarm, gently flowing water and mild soap for 15-20 minutes. If skin irritation occurs, get medical advice or attention.

Eye Contact

Rinse the contaminated eye(s) with lukewarm, gently flowing water for 5 minutes, while holding the eyelid(s) open. Immediately call a Poison Centre or doctor.

Ingestion

Never give anything by mouth if person is rapidly losing consciousness, or is unconscious or convulsing. Do not induce vomiting. Do not induce vomiting. Rinse mouth with water. Immediately call a Poison Centre or doctor.

First-aid Comments

Some of the first-aid procedures recommended here require advanced first-aid training. If exposed or concerned, get medical advice or attention.

Most Important Symptoms and Effects, Acute and Delayed

If in eyes: causes moderate to severe irritation.

If inhaled: can irritate the nose and throat. Can harm the nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Immediate Medical Attention and Special Treatment

Special Instructions

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

SECTION 5. FIRE-FIGHTING MEASURES

Extinguishing Media

Suitable Extinguishing Media

Carbon dioxide, dry chemical powder, appropriate foam, water spray or fog. Use water to keep non-leaking, fire-exposed containers cool.

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Unsuitable Extinguishing Media

Do not use a solid (straight) water stream as it may scatter and spread fire.

Specific Hazards Arising from the Product

Combustible liquid. Can form explosive mixtures with air at, or above 39 deg C. Can be ignited by static discharge. May accumulate in hazardous amounts in low-lying areas especially inside confined spaces, resulting in a fire and/or health hazard. Closed containers may rupture violently when heated releasing contents. May travel a considerable distance to a source of ignition and flash back to a leak or open container.

In a fire, the following hazardous materials may be generated: very toxic carbon monoxide, carbon dioxide.

Special Protective Equipment and Precautions for Fire-fighters

Evacuate area. Fight fire from a safe distance or a protected location. Approach fire from upwind to avoid hazardous vapours or gases. Use water spray to dilute spills to non-flammable mixtures. Use water spray to flush spills away from ignition sources. Knock down vapours or gases with water fog or fine water spray. For a massive fire, immediately evacuate the area and use unmanned hose holder or monitor nozzles.

Fire-fighters may enter the area if positive pressure SCBA and full Bunker Gear is worn.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Precautions, Protective Equipment, and Emergency Procedures

Use the personal protective equipment recommended in Section 8 of this safety data sheet. Evacuate the area immediately. Isolate the hazard area. Keep out unnecessary and unprotected personnel. Increase ventilation to area or move leaking container to a well-ventilated and secure area. Eliminate all ignition sources if safe to do so. Remove or isolate incompatible materials as well as other hazardous materials.

Environmental Precautions

Do not allow into any sewer, on the ground or into any waterway. If the spill is inside a building, prevent product from entering drains, ventilation systems and confined areas.

Methods and Materials for Containment and Cleaning Up

Stop or reduce leak if safe to do so. Small spills or leaks: contain spill with earth, sand, or absorbent material which does not react with spilled material. Place used absorbent into suitable, covered, labelled containers for disposal.

Contaminated absorbent poses the same hazard as the spilled product. Flush spill area.

Large spills or leaks: contact emergency services and manufacturer/supplier for advice.

SECTION 7. HANDLING AND STORAGE

Precautions for Safe Handling

Wear personal protective equipment to avoid direct contact with this chemical. Eliminate heat and ignition sources such as sparks, open flames, hot surfaces and static discharge. Post "No Smoking" signs. Electrically bond and ground equipment. Ground clips must contact bare metal. Use non-sparking tools. Avoid generating vapours or mists. Only use where there is adequate ventilation. Prevent accidental contact with incompatible chemicals. Never return unused or contaminated product to its original container. Keep containers tightly closed when not in use or empty.

Conditions for Safe Storage

Store in an area that is: cool, dry, well-ventilated. Away from heat and ignition sources. Secure and separate from work areas, separate from incompatible materials (see Section 10: Stability and Reactivity), clear of combustible and flammable materials (e.g. old rags, cardboard). Protect from conditions listed in Conditions to Avoid in Section 10 (Stability and Reactivity). Store in a closed container. Keep amount in storage to a minimum.

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control Parameters

Chemical Name	ACGIH TLV®		OSHA PEL		AIHA WEEL	
	TWA	STEL	TWA	Ceiling	8-hr TWA	TWA
Methyl amyl ketone	50 ppm		100 ppm			

Appropriate Engineering Controls

Use local exhaust ventilation and enclosure, if necessary, to control amount in the air. Use non-sparking ventilation systems, approved explosion-proof equipment and intrinsically safe electrical systems in areas where this product is

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used and stored. Exhaust directly to the outside, taking any necessary precautions for environmental protection.

Individual Protection Measures

Eye/Face Protection

Wear chemical safety goggles and face shield when contact is possible.

Skin Protection

Wear chemical protective clothing e.g. gloves, aprons, boots.

Suitable materials are: Barrier® (PE/PA/PE).

The following materials should NOT be used: natural rubber, neoprene rubber, Viton®, Viton®/butyl rubber.

Respiratory Protection

Wear a NIOSH approved air-purifying respirator with an organic vapour cartridge, wear a NIOSH approved air-purifying respirator with an appropriate cartridge.

SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Basic Physical and Chemical Properties

Appearance	Light white liquid.
Odour	Banana-like
Odour Threshold	Not available
pH	Not applicable
Melting Point/Freezing Point	-26 - -35 °C (-15 - -31 °F) (melting); -26 - -35 °C (-15 - -31 °F) (freezing)
Initial Boiling Point/Range	150.6 - 151.5 °C (303.1 - 304.7 °F)
Flash Point	39 °C (102 °F) (closed cup)
Evaporation Rate	0.34 (n-butyl acetate = 1)
Flammability (solid, gas)	Not applicable
Upper/Lower Flammability or Explosive Limit	7.9% (upper); 1.1% (lower)
Vapour Pressure	0.213 kPa (1.598 mm Hg) at 25 °C
Vapour Density (air = 1)	3.94
Relative Density (water = 1)	0.817 at 20 °C
Solubility	Slightly soluble (0.1-1 g/100 mL) in water; Highly soluble in alcohols (e.g. ethanol).
Partition Coefficient, n-Octanol/Water (Log Kow)	2.06
Auto-ignition Temperature	393 °C (739 °F)
Decomposition Temperature	Not available
Viscosity	Not available (kinematic); 0.77 mPa.s at 20 °C (dynamic)
Other Information	
Physical State	Liquid
Molecular Weight	114.19

SECTION 10. STABILITY AND REACTIVITY

Reactivity

None known.

Chemical Stability

Normally stable.

Possibility of Hazardous Reactions

None known.

Conditions to Avoid

High temperatures. Open flames, sparks, static discharge, heat and other ignition sources. Prolonged exposure to air. Temperatures above 39.0 °C (102.2 °F)

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Incompatible Materials

Oxidizing agents (e.g. peroxides), strong acids (e.g. hydrochloric acid).

Hazardous Decomposition Products

Peroxides.

SECTION 11. TOXICOLOGICAL INFORMATION

Likely Routes of Exposure

Inhalation; skin contact; eye contact; ingestion.

Acute Toxicity

Chemical Name	LC50	LD50 (oral)	LD50 (dermal)
Methyl amyl ketone	2000 ppm (rat) (4-hour exposure)	1670 mg/kg (female mouse)	10300 mg/kg (rabbit)

Skin Corrosion/Irritation

Animal tests show mild irritation.

Serious Eye Damage/Irritation

Animal tests show mild irritation.

STOT (Specific Target Organ Toxicity) - Single Exposure

Inhalation

At high concentrations may cause nose and throat irritation, depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

Ingestion

If large amounts are swallowed may cause depression of the central nervous system. Symptoms may include headache, nausea, dizziness, drowsiness and confusion.

May cause irritation of the mouth, throat and stomach. Symptoms may include nausea, vomiting, stomach cramps and diarrhea.

Aspiration Hazard

May be drawn into the lungs (aspirated) if swallowed or vomited.

STOT (Specific Target Organ Toxicity) - Repeated Exposure

May cause effects on the peripheral nervous system. May cause dermatitis. Symptoms may include dry, red, cracked skin (dermatitis).

Respiratory and/or Skin Sensitization

No information was located.

Carcinogenicity

Chemical Name	IARC	ACGIH®	NTP	OSHA
Methyl amyl ketone	Not evaluated	Not designated	Not Listed	Not Listed

Reproductive Toxicity

Development of Offspring

No information was located.

Sexual Function and Fertility

No information was located.

Effects on or via Lactation

No information was located.

Germ Cell Mutagenicity

No information was located.

Interactive Effects

No information was located.

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SECTION 12. ECOLOGICAL INFORMATION

This section is not required by WHMIS. This section is not required by OSHA HCS 2012.

SECTION 13. DISPOSAL CONSIDERATIONS

Disposal Methods

Dispose of contents and container in accordance with local, regional, national and international regulations.

SECTION 14. TRANSPORT INFORMATION

Regulation	UN No.	Proper Shipping Name	Transport Hazard Class(es)	Packing Group
Canadian TDG	UN1110	n-AMYL METHYL KETONE	3	III
US DOT	UN1110	n-AMYL METHYL KETONE	3	III

Special Precautions Not applicable

Transport in Bulk According to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15. REGULATORY INFORMATION

Safety, Health and Environmental Regulations

Canada

Domestic Substances List (DSL) / Non-Domestic Substances List (NDSL)

Listed on the DSL.

USA

Toxic Substances Control Act (TSCA) Section 8(b)

Listed on the TSCA Inventory.

SECTION 16. OTHER INFORMATION

NFPA Rating **Health - 1** **Flammability - 2** **Instability - 0**

SDS Prepared By Alphachem Limited

Phone No. (905)-821-2995

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References CHEMINFO database. Canadian Centre for Occupational Health and Safety (CCOHS).

Disclaimer This document is offered only as a guide in the safe handling of the above product, and has been prepared from the best information currently available. It is not intended to be all-inclusive and the conditions of use may involve other additional considerations. Since Alphachem Limited cannot anticipate or control the conditions under which the product may be used, it will not be liable for any claims, damages or losses which may result from the use or reliance on any information herein.

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