

## Methyl Amyl Ketone

## MATERIAL SAFETY DATA SHEET

## SECTION 1. CHEMICAL PRODUCT &amp; COMPANY IDENTIFICATION

PRODUCT NAME: Methyl Amyl Ketone (MAK)  
PRODUCT IDENTIFICATION NUMBER (S): SPC 19040  
COMPANY IDENTITY: Cumberland Products, Inc.  
COMPANY ADDRESS: 50 Commerce Parkway  
Hodgenville, KY 42748  
COMPANY PHONE: 1-800-223-1918  
CHEMTREC PHONE: 1-800-424-9300  
CHEMICAL NAME: 2-heptanone  
SYNONYM (S): EAN 902185; PM 00133-00; PM 15455-00  
MOLECULAR FORMULA: C7H14O  
MOLECULAR WEIGHT: 114.19  
PRODUCT USE: Solvent

## SECTION 2. COMPOSITION / INFORMATION ON INGREDIENTS

Weight %	Component	CAS Registry No.
100	methyl n-amyl ketone	000110-43-0

## SECTION 3. HAZARDS IDENTIFICATION

## WARNING!

COMBUSTIBLE LIQUID AND VAPOR

HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT

PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE DRYING, CRACKING, OR IRRITATION

HMIS Hazard Ratings: Health - 1, Flammability - 2, Chemical Reactivity - 0

NFPA Hazard Ratings: Health - 1, Flammability - 2, Instability - 0

NOTE: HMIS and NFPA ratings involve data and interpretations that may vary from company to company. They are intended only for rapid, general identification of the magnitude of the specific hazard. To deal adequately with the safe handling of this material, all the information contained in this MSDS must be considered.

## SECTION 4. FIRST AID MEASURES

## INHALATION:

Move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

**EYE:**

In case of irritation from airborne exposure, move to fresh air. If easy to do, remove contact lenses. Get medical attention if symptoms persist.

**SKIN:**

Wash with soap and water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash contaminated clothing before reuse. Destroy or thoroughly clean contaminated shoes.

**INGESTION:**

Seek medical advice.

**SECTION 5. FIRE FIGHTING MEASURES**

**EXTINGUISHING MEDIA:**

Water spray, dry chemical, carbon dioxide (CO<sub>2</sub>), foam

**SPECIAL FIRE FIGHTING PROCEDURES:**

Wear self-contained breathing apparatus and protective clothing. Use water spray to keep fire-exposed containers cool.

**HAZARDOUS COMBUSTION PRODUCTS**

Carbon dioxide, carbon monoxide

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

Combustible.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

Eliminate all ignition sources. Absorb spill with vermiculite or other inert material, then place in a container for chemical waste.

**FOR LARGE SPILLS:**

Flush spill area with water spray. Prevent runoff from entering drains, sewers, or streams.

**SECTION 7. HANDLING AND STORAGE**

**PERSONAL PRECAUTIONARY MEASURES:**

Avoid breathing vapor at concentrations. Avoid prolonged or repeated contact with skin. Use only with adequate ventilation. Wash thoroughly after handling.

**PREVENTION OF FIRE AND EXPLOSION:**

Keep away from heat and flame. Keep from contact with oxidizing materials.

**STORAGE:**

Keep container closed.

**SECTION 8. EXPOSURE CONTROLS / PERSONAL PROTECTION**

**EXPOSURE LIMITS:**

ACGIH Threshold Limit Value (TLV): methyl n-amyl ketone: 50 ppm TWA

OSHA (USA) Permissible Exposure Limit (PEL, 1989 Table Z-1-A values or section-specific standards): methyl n-amyl ketone: 100 ppm TWA

**VENTILATION:**

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to

conditions. Use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits.

#### RESPIRATORY PROTECTION:

If engineering controls do not maintain airborne concentrations below recommended exposure limits, an approved respirator must be worn. Respirator type: organic vapor. If respirators are used, a program should be instituted to assure compliance with OSHA Standard 29 CFR 1910.134.

#### EYE PROTECTION:

It is a good industrial hygiene practice to minimize eye contact.

#### SKIN PROTECTION:

For operations where prolonged or repeated skin contact may occur, chemical-resistant gloves should be worn. Contact glove manufacturer for specific information.

#### RECOMMENDED DECONTAMINATION FACILITIES:

Eye bath, washing facilities

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL FORM:	Liquid
COLOR:	Colorless
ODOR:	Sweet
ODOR THRESHOLD:	49 ppb
SPECIFIC GRAVITY AT 20 C (68 F) (water = 1):	0.81
VAPOR PRESSURE AT 20 C (68 F):	2.8 mbar (2.1 mm Hg)
VAPOR DENSITY (air = 1):	3.9
EVAPORATION RATE (n-butyl acetate = 1):	0.34
BOILING POINT:	152 C (304 F)
MELTING POINT:	-36 C (-27 F)
VISCOSITY AT AMBIENT TEMPERATURE:	Not available
SOLUBILITY IN WATER:	Slight
pH:	Not available
OCTANOL / WATER PARTITION COEFFICIENT:	Log P = 1.98, P = 95.4
FLASH POINT (Tag closed cup):	39 C (102 F)
LOWER EXPLOSIVE LIMIT AT 66 C (151 F):	1.11 volume %
UPPER EXPLOSIVE LIMIT AT 121 C (250 F):	7.9 volume %
AUTOIGNITION TEMPERATURE (ASTM D 2155):	393 C (740 F)
SENSITIVITY TO MECHANICAL IMPACT:	Insensitive at 100 kg-cm
SENSITIVITY TO STATIC DISCHARGE:	Not available

### SECTION 10. REACTIVITY DATA

#### STABILITY:

Stable.

#### INCOMPATIBILITY:

Material can react violently with strong oxidizing agents.

#### HAZARDOUS POLYMERIZATION:

Will not occur.

### SECTION 11. TOXICOLOGICAL INFORMATION

#### EFFECTS OF EXPOSURE:

GENERAL:	Based on animal data and structure-activity relationships, this product is NOT expected to cause nervous system damage.
INHALATION:	High vapor concentrations may cause drowsiness and irritation.
EYES:	High vapor concentrations may cause irritation.
SKIN:	Prolonged or repeated contact may cause drying, cracking, or irritation.
INGESTION:	Expected to be a low ingestion hazard.
ACUTE TOXICITY DATA:	
Oral LD-50 (rat):	1600 mg/kg
Oral LD-50 (mouse):	730 mg/kg
Inhalation LC-50 (rat):	2000-4000 ppm / 4 hour (s)
Dermal LD-50 (rabbit):	12.6 mL/kg
Dermal LD-50 (guinea pig):	>20 mL/kg
Skin irritation (rabbit):	Slight to moderate
Skin irritation (human):	None
Eye irritation (rabbit):	Slight

Definitions for the following section(s):  
 LOEL = lowest-observed-effect level  
 NOAEL = no observed-adverse-effect level  
 NOEL = no-observed-effect level

**SUBCHRONIC TOXICITY DATA:**

Oral study (13 weeks, rat):	LOEL = 100 ppm (target organ effects: kidney) (increase in weight: liver); NOEL = 20 mg/kg/day
Oral study (12 weeks, rat):	NOEL = 0.5% in drinking water (highest concentration tested)
Inhalation study (9 months, rat):	NOEL = 1025 ppm (highest concentration tested)
Inhalation study (9 months, monkey):	NOEL = 1025 ppm (highest concentration tested)

**SECTION 12. ECOLOGICAL INFORMATION**

**INTRODUCTION:**

This environmental effects summary is written to assist in addressing emergencies created by an accidental spill, which might occur during the shipment of this material, and, in general, it is not meant to address discharges to sanitary sewers or publicly owned treatment works.

**SUMMARY**

Data for this material have been used to estimate its environmental impact. It has the following properties: a low potential to affect aquatic organisms, a low potential to bioconcentrate. The subject product is expected to biodegrade and is not expected to persist for long periods in an aquatic environment.

**OXYGEN DEMAND DATA**

BOD-5:	1.77 g oxygen/g
BOD-20:	2.0 g oxygen/g
COD:	2.42 g oxygen/g

**ACUTE AQUATIC EFFECTS DATA**

96-h LC-50 (fathead minnow): 131 mg/L

#### SECTION 13. DISPOSAL CONSIDERATIONS

Discharge, treatment, or disposal may be subject to national, state, or local laws. Incinerate.  
Since emptied containers retain product residue, follow label warnings even after container is emptied.

#### SECTION 14. TRANSPORT INFORMATION

DOT (USA) STATUS: quantities of 450 liters (119 gallons) or less are not regulated; the following requirements apply to larger quantities

Class combustible liquid, packing group III

AIR – International Civil Aviation Organization (ICAO)

ICAO STATUS: regulated

Class 3, packing group III

SEA – International Maritime Dangerous Goods (IMDG)

IMDG STATUS: regulated

Class 3.3, packing group III

#### SECTION 15. REGULATORY INFORMATION

This document has been prepared in accordance with the MSDS requirements of the OSHA Hazard Communication Standard 29 CFR 1910.1200.

OSHA Classification: hazardous

CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause cancer: none

CALIFORNIA PROPOSITION 65 (Safe Drinking Water and Toxic Enforcement Act of 1986): material(s) known to the State to cause adverse reproductive effects: none

This document has been prepared in accordance with the MSDS requirements of the WHMIS Controlled Products Regulation.

WHMIS (Canada) Status: controlled

WHMIS (Canada) Hazard Classification: B/3, D/2/B

#### CARCINOGENICITY CLASSIFICATION (COMPONENTS PRESENT AT 0.1% OR MORE)

International Agency for Research on Cancer (IARC): not listed

American Conference of Governmental Industrial Hygienists (ACGIH): not listed

National Toxicology Program (NTP): not listed

Occupational Safety and Health Administration (OSHA): not listed

Chemical(s) subject to the reporting requirements of Section 313 or Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986 and 40 CFR Part 372: none

SARA (USA) Sections 311 and 312 hazard classification(s): fire hazard, immediate (acute) health hazard

US Toxic Substances Control Act (TSCA): This product is listed on the TSCA inventory or otherwise complies with TSCA inventory. Any impurities present in this product are exempt from listing.

Canadian Environmental Protection Act (CEPA) and Domestic Substances List (DSL): This product is listed on the DSL or otherwise complies with CEPA new substance notification requirements.

European Inventory of Existing Commercial Chemical Substances (EINECS): This product is listed on EINECS.  
EINECS Number: 2037671

Australian Inventory of Chemical Substances (AICS) and National Industrial Chemicals Notification and Assessments Scheme (NICNAS): This product is listed on AICS or otherwise complies with NICNAS.

Japanese Handbook of Existing and New Chemical Substances: This product is listed in the Handbook or has been approved in Japan by new substance notification.

## SECTION 16. OTHER INFORMATION

### LABEL STATEMENTS:

#### WARNING!

#### COMBUSTIBLE LIQUID AND VAPOR

HIGH VAPOR CONCENTRATIONS MAY CAUSE DROWSINESS AND IRRITATION OF THE EYES OR RESPIRATORY TRACT PROLONGED OR REPEATED SKIN CONTACT MAY CAUSE DRYING, CRACKING, OR IRRITATION

Keep away from heat and flame.

Avoid breathing high vapor concentrations.

Avoid prolonged or repeated contact with skin.

Keep container closed.

Use only with adequate ventilation.

Wash thoroughly after handling.

### FIRST AID

In case of skin contact, wash skin with soap and plenty of water. Remove contaminated clothing and shoes. Get medical attention if symptoms occur. Wash clothing before reuse. Destroy or thoroughly clean contaminated shoes. If inhaled, move to fresh air. Treat symptomatically. Get medical attention if symptoms persist.

### IN CASE OF FIRE

Use water spray, dry chemical, carbon dioxide (CO<sub>2</sub>), foam. Use water spray to keep fire-exposed containers cool.

### IN CASE OF SPILL

Eliminate all ignition sources. Flush spill area with water spray. Prevent runoff from entering drains, sewers, and streams.

Since emptied containers retain product residue, follow label warnings even after container is emptied.

### CAUTION: FOR MANUFACTURING, PROCESSING OR REPACKING BY TRAINED PERSONNEL

The information contained herein is based on current knowledge and experience; no responsibility is accepted that the information is sufficient or correct in all cases. Users should consider these data 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 and disposal of these materials and the safety and health of employees and customers and the protection of the environment.