SAFETY DATA SHEET: METHYL PROPYL KETONE

1. IDENTIFICATION

Product Name: METHYL PROPYL KETONE
Synonyms: MPK
Formula and Formula Weight: C5H10O   86.13
Integra numbers beginning with: M755.50
Recommended Use: Commercial/industrial use
Restrictions on Use: No information available

INTEGRA Chemical Company
24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)
1216 6th Ave N
Kent WA  98032
Phone: 253-479-7000

2. HAZARDS IDENTIFICATION

OSHA Classification: Hazard Category: Hazard Statement:
Skin Corrosion/Irritation 2 Causes skin irritation.
Eye Damage/Irritation 2A Causes serious eye irritation.
Specific Target Organ Toxicity (single exposure) 3 May cause respiratory irritation.
Flammable Liquids 2 Highly flammable liquid and vapor.

Signal Word: DANGER

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

Response
If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water, shower. If skin irritation occurs: Get medical advice, attention.
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 eye irritation persists: Get medical advice, attention.
Call a poison center, doctor if you feel unwell.
Specific treatment (see first aid section on this label)
Take off contaminated clothing and wash it before reuse.
In case of fire: Use dry chemical, CO2, water spray or alcohol-resistant foam to extinguish.

Storage
Store locked up in a well ventilated place. Keep container tightly closed. Keep cool.

Disposal
Dispose of contents, container in accordance with all governmental regulations.

Hazards Not Otherwise Classified: No information available

3. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>Synonyms</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Methyl propyl ketone</td>
<td>MPK; 2-Pentanone; Ethyl acetone</td>
<td>00107-87-9</td>
<td>&gt;90</td>
</tr>
<tr>
<td>Methyl isobutyl ketone</td>
<td>4-Methyl-2-pentanone; MiBK; Hexone</td>
<td>00108-10-1</td>
<td>&lt;10</td>
</tr>
</tbody>
</table>

4. FIRST AID MEASURES

Inhalation: Remove person to fresh air and keep comfortable for breathing.
Eye Contact: Flush eyes with plenty of water. Remove contact lenses, if present and easy to do. If irritation persists, seek medical attention.
5. PHYSICAL AND CHEMICAL PROPERTIES

Vapor Pressure: 27 mm Hg @20°C

Relative Density: 0.81    Water=1

Solubility: Moderately soluble in water

Partition Coefficient: n-octanol/water log Pow: 0.86

6. FIRE-FIGHTING MEASURES

Extinguishing Media: Use dry chemicals, carbon dioxide, water spray or alcohol-resistant foam.

Special Equipment and Precautions: Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.

Specific Hazards: Vapors may flow along surfaces to distant ignition sources and flash back. Vapors are heavier than air and will settle in low areas. Material may float on water and re-ignite.

Hazardous combustion products: Oxides of carbon.

6. ACCIDENTAL RELEASE MEASURES

Spill Procedures: Remove all potential ignition sources. Prevent spread of spill. Wear full protective equipment including suitable respiratory protection. Absorb with sand or inert material. Place into suitable container for disposal.

Ingestion: Rinse mouth and give victim large quantities of water. Never give anything by mouth to an unconscious person. Seek immediate medical attention.

Skin Contact: Remove contaminated clothing. Flush skin with plenty of water. Seek medical attention if irritation develops.

7. HANDLING AND STORAGE


Storage and Handling: Store locked up in a cool, dry, well-ventilated flammable liquids storage area or cabinet away from incompatible materials. Keep away from heat and ignition sources. Keep containers tightly closed and protect them from physical damage. Bond and ground containers when transferring liquid. Use only non-sparking tools and take precautionary measures against static discharge. No smoking.

Methyl propyl ketone may form peroxides on long standing with exposure to air and light. Store away from heat, air and light. Do not evaporate to near dryness. Test for peroxide content before distilling.

Keep away from heat, sparks, open flames, hot surfaces. – No smoking.

Keep container tightly closed.

Ground, bond container and receiving equipment.

Use explosion-proof electrical, ventilating, lighting, equipment.

Use only non-sparking tools.

Take precautionary measures against static discharge.

Avoid breathing dust, fume, gas, mist, vapors, spray.

Wash thoroughly after handling.

Use only outdoors or in a well-ventilated area.

Wear protective gloves, eye protection, face protection.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

OSHA & ACGIH Exposure Limits:

- Methyl propyl ketone
  OSHA TWA: 200 ppm; 700 mg/m³
  ACGIH TWA: 200 ppm; 705 mg/m³
  ACGIH STEL: 250 ppm; 881 mg/m³

- Methyl isobutyl ketone
  OSHA TWA: 100 ppm; 410 mg/m³
  ACGIH TWA: 20 ppm; 82 mg/m³
  ACGIH STEL: 75 ppm; 307 mg/m³

Engineering Controls:

Use general or local exhaust ventilation to meet TLV and PEL requirements.

Respiratory Protection:

Respiratory protection required if airborne concentrations exceed PEL or TLV. Use a NIOSH approved full facepiece chemical cartridge respirator with an organic vapor cartridge.

Skin/Eye Protective Equipment:

Safety goggles, protective clothing and gloves appropriate for the risk of exposure.

Facilities storing or utilizing this material should have readily accessible eyewash stations and safety showers.

Select respirators and other safety equipment in accordance with regulations and based upon the particular conditions of use and risk of exposure. Always use safe chemical-handling and good industrial hygiene practices.

8. PHYSICAL AND CHEMICAL PROPERTIES

Apearance: Colorless liquid

Odor: Ketone odor

Odor Threshold: 1.55 ppm

pH: Not available

Melting/Freezing Point: -78 °C

Initial Boiling Point and Boiling Range: 101 °C

Flash Point: 7 °C

Evaporation Rate: Not available

Flammability: Not available

Flammable or Explosive

  Limits (% by volume in air)
  Upper: 8.7
  Lower: 1.5

Vapor Pressure: 27 mm Hg @20°C

Vapor Density: 2.9

Relative Density: 0.81    Water=1

Solubility: Moderately soluble in water
10. STABILITY AND REACTIVITY

Reactivity: No information available
Stability: Stable
Possibility of Hazardous Reactions: Hazardous polymerization will not occur
Conditions to Avoid: Heat, sparks and open flame. Exposure to air and light.
Incompatibles: Incompatible with strong bases and strong oxidizers. Reducing agents.
Decomposition Products: Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Effects of Over Exposure:
Inhalation: Harmful if inhaled. Symptoms include respiratory tract irritation, coughing, dizziness, dullness and headache. High concentrations can produce central nervous system depression, narcosis and unconsciousness. May cause sore throat, drowsiness, coma.
Skin Contact: May cause skin irritation. Prolonged contact may cause dermatitis. May cause dry, cracked skin.
Eye Contact: May irritate or burn the eyes.
Ingestion: Harmful if swallowed. Ingestion may cause headache, dizziness, nausea, vomiting, gastrointestinal irritation.
Chronic Effects: None identified
Target Organs: Eyes, skin, respiratory system, central nervous system.
Additional Effects: May aggravate pre-existing skin conditions, respiratory conditions
Reproductive Effects: None identified
Carcinogenicity: Methyl isobutyl ketone is listed by the IARC as Group 2B, Possible Human Carcinogen.

Toxicity Data:
- Methyl propyl ketone
  - LD50 (skin, rabbit): 6480 mg/kg
  - LD50 (oral, rat): 3730 mg/kg
- Methyl isobutyl ketone
  - Irritation (skin, rabbit): mild 500 mg/24 hr
  - LC50 (inhalation, mouse): 23300 mg/m3
  - LD50 (oral, rat): 2080 mg/kg

12. ECOLOGICAL INFORMATION

Aquatic Toxicity Data: Terrestrial Toxicity Data:
- Methyl propyl ketone
  - No information available
- Methyl isobutyl ketone
  - LC50 Leuciscus idus melanotus: 480 mg/L
  - No information available

Persistence and degradability: No information available
Bioaccumulative potential: No information available
Mobility in soil: No information available
Other adverse effects: No information available

13. DISPOSAL CONSIDERATIONS

Disposal Procedures: Dispose of material and containers in accordance with all local, state and federal regulations.

14. TRANSPORTATION INFORMATION

This product is a regulated material for domestic ground transportation, per CFR Title 49.

UN Number: UN1224
Proper Shipping Name: Ketones, liquid, nos (methyl propyl ketone, methyl isobutyl ketone)
Packing Group: II
Hazard Class: 3
Environmental hazards: No information available
Special precautions: No information available
Bulk transport: No information available

15. REGULATORY INFORMATION

Methyl propyl ketone is listed in the TSCA inventory.
Methyl isobutyl ketone is listed in the TSCA inventory and in SARA 313.

16. OTHER INFORMATION

OSHA SDS #: 25946 rev 101 3/27/2015

NE = Not established, NA = Not applicable or Not available
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***** END OF SDS *****