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**PHARMCO-AAPER**

AND COMMERCIAL ALCOHOLS

Product Information (203) 740-3471 / Emergency Assistance CHEMTREC 1-800-424-9300

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Manufacturer: PHARMCO-AAPER  
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### 3-Methyl-2-butanone

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#### 1. CHEMICAL PRODUCT IDENTIFICATION

Product Name: 3-Methyl-2-butanone  
Synonym(s): Methyl Isopropyl Ketone, MIPK; Isopropyl methyl ketone  
Molecular Formula:  $(\text{CH}_3)_2\text{CHCOCH}_3$   
Molecular Weight: 86.13

#### 2. COMPOSITION/INFORMATION ON INGREDIENTS

Weight % - Component - (CAS Registry Number)  
100 3-Methyl-2-butanone (563-80-4)

#### 3. HAZARDS IDENTIFICATION

WARNING! FLAMMABLE LIQUID. MAY CAUSE RESPIRATORY TRACT IRRITATION. HARMFUL IF SWALLOWED. CAUSES DIGESTIVE TRACT IRRITATION. CAUSES EYE AND SKIN IRRITATION.

NFPA Hazard Ratings: Health - 2, Flammability - 3, Instability - 0

NOTE: 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.

Potential Health Effects

Eye: Causes eye irritation.

Skin: May cause skin irritation.

Ingestion: Causes gastrointestinal irritation with nausea, vomiting and diarrhea.

Inhalation: May cause respiratory tract irritation. Vapors may cause dizziness or suffocation.

Chronic: Not available.

Target Organs: None.

#### **4. FIRST-AID MEASURES**

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower lids. Get medical aid immediately.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid immediately.

Inhalation: Get medical aid immediately. Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.

Notes to Physician: Treat symptomatically and supportively.

#### **5. FIRE FIGHTING MEASURES**

Autoignition Temperature: 427 deg C (800.60 deg F)

Flash Point: 6 deg C (42.80 deg F)(estimated)

Explosion Limits, Lower: 1.80 vol % Upper: 9.00 vol %

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Will burn if involved in a fire. Use water spray to keep fire-exposed containers cool. Containers may explode in the heat of a fire. Flammable Liquid. Vapors may be heavier than air. They can spread along the ground and collect in low or confined areas.

Extinguishing Media: For small fires, use dry chemical, carbon dioxide, water spray or alcohol-resistant foam. For large fires, use water spray, fog, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective. Do NOT use straight streams of water.

#### **6. ACCIDENTAL RELEASE MEASURES**

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material, (e.g., dry sand or earth), then place into a chemical waste container. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation. A vapor suppressing foam may be used to reduce vapors.

#### **7. HANDLING AND STORAGE**

Handling: Wash thoroughly after handling. Use only in a well ventilated area. Ground and bond containers when transferring material. Use spark-proof tools and explosion proof equipment. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous.

Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls: Use adequate general or local exhaust ventilation to keep airborne concentrations below the permissible exposure limits.

### Exposure Limits

ACGIH: 200 ppm; 705 mg/m<sup>3</sup>

NIOSH: 200 ppm TWA; 705 mg/m<sup>3</sup> TWA

OSHA - Final PELs: none listed

OSHA Vacated PELs: 200 ppm TWA; 705 mg/m<sup>3</sup> TWA

### Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

Physical State: Liquid

Appearance: colourless

Odor: acetone-like

pH: Not available.

Vapor Pressure: 55 hPa @ 20 C

Vapor Density: 3.0

Evaporation Rate:

Viscosity: Not available.

Boiling Point: 94.0 - 95.0 deg C @ 760.00mm

Freezing/Melting Point: -92.0 deg C

Decomposition Temperature: Not available.

Solubility: 6 g/l (20 c)

Specific Gravity/Density: 0.8050g/cm<sup>3</sup>

## 10. STABILITY AND REACTIVITY

Chemical Stability: Stable under normal temperatures and pressures.

Conditions to Avoid: Incompatible materials, ignition sources, excess heat, strong oxidants.

Incompatibilities with Other Materials: Strong oxidizing agents.

Hazardous Decomposition Products: Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.

Hazardous Polymerization: Has not been reported.

## 11. TOXICOLOGICAL INFORMATION

RTECS#: CAS# 563-80-4: EL9100000

LD50/LC50: CAS# 563-80-4:

Oral, mouse: LD50 = 2572 mg/kg;

Oral, rat: LD50 = 148 mg/kg;

Skin, rabbit: LD50 = 6350 mg/kg;

Carcinogenicity: CAS# 563-80-4: Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.

Epidemiology: No data available.

Teratogenicity: No data available.

Reproductive Effects: No data available.

Neurotoxicity: No data available.

Mutagenicity: No data available.

Other Studies: No data available.

## 12. ECOLOGICAL INFORMATION

Ecotoxicity: Not available.

Environmental Fate: Not available.

Physical/Chemical: Not available.

Other: Not available.

## 13. DISPOSAL CONSIDERATIONS

Dispose of in a manner consistent with federal, state, and local regulations.

RCRA D-Series Maximum Concentration of Contaminants: None listed.

RCRA D-Series Chronic Toxicity Reference Levels: None listed.

RCRA F-Series: None listed.

RCRA P-Series: None listed.

RCRA U-Series: None listed.

## 14. TRANSPORT INFORMATION

Domestic (Land, D.O.T.)

Proper Shipping Name: 3-Methylbutan-2-one

Hazard Class: 3

UN/NA: UN2397

Packing Group: II

International (Water, I.M.O.)

Proper Shipping Name: 3-Methylbutan-2-one

Hazard Class: 3.2

UN/NA: UN2397  
Packing Group: II

International (Air, I.C.A.O.)  
Proper Shipping Name: 3-Methylbutan-2-one  
Hazard Class: 3  
UN/NA: UN2397  
Packing Group: II

## 15. REGULATORY INFORMATION

### US FEDERAL

TSCA: CAS# 563-80-4 is listed on the TSCA inventory.

Health & Safety Reporting List: None of the chemicals are on the Health & Safety Reporting List.

Chemical Test Rules: None of the chemicals in this product are under a Chemical Test Rule.

Section 12b: None of the chemicals are listed under TSCA Section 12b.

TSCA Significant New Use Rule: None of the chemicals in this material have a SNUR under TSCA.

SARA

Section 302 (RQ): None of the chemicals in this material have an RQ.

Section 302 (TPQ): None of the chemicals in this product have a TPQ.

SARA Codes: CAS # 563-80-4: acute, flammable.

Section 313: No chemicals are reportable under Section 313.

Clean Air Act: This material does not contain any hazardous air pollutants. This material does not contain any Class 1 Ozone depleters. This material does not contain any Class 2 Ozone depleters.

Clean Water Act: None of the chemicals in this product are listed as Hazardous Substances under the CWA. None of the chemicals in this product are listed as Priority Pollutants under the CWA. None of the chemicals in this product are listed as Toxic Pollutants under the CWA.

OSHA: None of the chemicals in this product are considered highly hazardous by OSHA.

STATE

CAS# 563-80-4 can be found on the following state right to know lists: California, New Jersey, Florida, Pennsylvania, Minnesota, Massachusetts.

California No Significant Risk Level: None of the chemicals in this product are listed.

European/International Regulations

European Labeling in Accordance with EC Directives

Hazard Symbols: F

Risk Phrases: R 11 Highly flammable.

Safety Phrases: S 16 Keep away from sources of ignition - No smoking. S 33 Take precautionary measures against static discharges. S 9 Keep container in a well-ventilated place.

WGK (Water Danger/Protection)

CAS# 563-80-4: 1

Canada

CAS# 563-80-4 is listed on Canada's DSL/NDSL List.

This product does not have a WHMIS classification.

CAS# 563-80-4 is not listed on Canada's Ingredient Disclosure List.

**Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA):** No chemicals in this material with known CAS numbers are subject to the reporting requirements of CERCLA.

Exposure Limits

CAS# 563-80-4: OEL-AUSTRALIA:TWA 200 ppm (705 mg/m<sup>3</sup>) OEL-BELGIUM:TWA 200 ppm (705 mg/m<sup>3</sup>)

OEL-DENMARK:TWA 200 ppm (705 mg/m<sup>3</sup>) OEL-FINLAND:TWA 200 ppm (700 mg/m<sup>3</sup>);STEL 250 ppm (875

mg/m<sup>3</sup>) OEL-FRANCE:TWA 200ppm (705 mg/m<sup>3</sup>) OEL-THE NETHERLANDS:TWA 200 ppm (705 mg/m<sup>3</sup>)

OEL-SWITZERLAND:TWA 200 ppm (720 mg/m<sup>3</sup>) OEL IN BULGARIA, COLOMBIA, JORDAN, KOREA  
check ACGIH TLV OEL IN NEW ZEALAND, SINGAPORE, VIETNAM check ACGI TLV

## 16. OTHER INFORMATION

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.