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THE POWER OF THREE<sup>3</sup>

**PHARMCO-AAPER**

AND COMMERCIAL ALCOHOLS

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

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## MATERIAL SAFETY DATA SHEETS

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Manufacturer: PHARMCO-AAPER  
58 Vale Road  
Brookfield, Connecticut 06804, USA  
Phone (203) 740-3471  
Fax (203) 740-3481

1101 Isaac Shelby Drive  
Shelbyville, KY 40065  
Phone (502) 633-0650  
Fax (502) 633-0685

Emergency Contact:  
CHEMTREC 1-800-424-9300

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DIISOBUTYL KETONE  
PRODUCT NAME: DIISOBUTYL KETONE

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### I. IDENTIFICATION

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PRODUCT NAME: DIISOBUTYL KETONE  
CHEMICAL NAME: N/A  
CHEMICAL FAMILY: Ketones  
FORMULA: C<sub>9</sub> H<sub>18</sub> O  
MOLECULAR WEIGHT: 142.24  
SYNONYMS: DIBK; 2,6-Dimethyl-4-heptanone; 2,6-Dimethylheptanone; Di-isobutylcetone;  
CAS # AND NAME: DIISOBUTYL KETONE  
N/A (mixture)

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### II. PHYSICAL DATA (Determined on typical material)

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BOILING POINT, 760 mm Hg: 169.4 C 336.9 F  
SPECIFIC GRAVITY(H<sub>2</sub>O = 1): 0.8075 AT 20/20 C

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FREEZING POINT: -46 C (-51 F)  
VAPOR PRESSURE AT 20°C: 1 mmHg AT 20 C  
VAPOR DENSITY (air = 1): 4.9  
EVAPORATION RATE:  
(Butyl Acetate = 1): 0.15

SOLUBILITY IN WATER by wt: 0.05% AT 20 C

APPEARANCE: Transparent colorless

ODOR: Mild

PHYSICAL STATE: Liquid

PERCENT VOLATILES (by weight): 100

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### III. INGREDIENTS

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% MATERIAL	CAS#	EXPOSURE LIMIT
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85 2,6-Dimethyl-4-Heptanone	108-83-8	25 ppm,TWA8,ACGIH &OSHA
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15 4,6 Dimethyl-2-Heptanone	19549-80-5	None established
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### IV. FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT (test method(s)): 120 F 49 C

120 F 49 C

Tag Open Cup ASTM D 1310

FLAMMABLE LIMITS IN AIR, by volume:

LOWER: 0.8 at 200 F

UPPER: 7.1 at 200 F

EXTINGUISHING MEDIA:

Apply alcohol type or all-purpose type foam by manufacturer's recommended techniques for large fires.

Use carbon dioxide or dry chemical media for small fires.

SPECIAL FIRE FIGHTING PROCEDURES: Use self-contained breathing apparatus and protective clothing.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

This material may produce a floating fire hazard in extreme fire conditions.

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### V. HEALTH HAZARD DATA

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TLV AND SOURCE:

Diisobutyl Ketone: 25 ppm TWA, OSHA & ACGIH

Diisobutyl Ketone: 25 ppm TWA, OSHA & ACGIH

EFFECTS OF SINGLE OVEREXPOSURE:

SWALLOWING:

Slightly toxic. Large quantities may cause nausea, vomiting, abdominal discomfort and dizziness.

Aspiration into the lungs may occur during ingestion or vomiting, resulting in lung injury.

SKIN ABSORPTION:

No evidence of harmful effects from available information.

INHALATION:

High concentrations of vapor may cause nausea, vomiting, headache, and dizziness.

Causes irritation of the respiratory tract, experienced as nasal discomfort and discharge with chest pain and coughing.

Loss of consciousness may occur.

SKIN CONTACT:

Brief contact may cause slight irritation with itching and local redness.

Prolonged or repeated contact may cause defatting and drying of the skin.

EYE CONTACT:

May cause mild discomfort.

High vapor concentrations may cause irritation, experienced as stinging, excess blinking and tear production, with excess redness of the conjunctiva.

**EFFECTS OF REPEATED OVEREXPOSURE:**

Repeated overexposure may cause damage to kidneys and liver.

**MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE:**

Skin contact may aggravate an existing dermatitis.

Inhalation of material may aggravate asthma and inflammatory or fibrotic pulmonary disease.

**SIGNIFICANT LABORATORY DATA WITH POSSIBLE RELEVANCE TO HUMAN**

**HEALTH HAZARD EVALUATION:**

Laboratory studies have demonstrated that exposure to vapor of this material may cause injury to the kidneys of male rats.

**OTHER EFFECTS OF OVEREXPOSURE:**

Aspiration may cause lung damage.

**EMERGENCY AND FIRST AID PROCEDURES:**

**SWALLOWING:**

If patient is fully conscious, give two glasses of water. **DO NOT INDUCE VOMITING.** Obtain medical attention.

**SKIN:**

Remove contaminated clothing. Wash skin with soap and water. Obtain medical attention if irritation persists. Wash clothing before reuse.

**INHALATION:**

Remove to fresh air. Give artificial respiration if not breathing. If breathing is difficult, oxygen may be given by qualified personnel. Obtain medical attention.

**EYES:**

Immediately flush eyes with water and continue washing for several minutes.

Obtain medical attention if discomfort persists.

**NOTES TO PHYSICIAN:**

There is no specific antidote. Treatment of overexposure should be directed at the control of symptoms and the clinical condition of the patient.

Any material aspirated during vomiting may cause lung injury. Therefore, emesis should not be induced mechanically or pharmacologically. If it is considered necessary to evacuate the stomach contents, this should be done by means least likely to cause aspiration (e.g., gastric lavage after endotracheal intubation).

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**VI. REACTIVITY DATA**

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**STABILITY:** Stable

**CONDITIONS TO AVOID:**

None known.

**INCOMPATIBILITY (materials to avoid):** Strong oxidizing agents.

**HAZARDOUS COMBUSTION OR DECOMPOSITION PRODUCTS:**

Burning can produce the following combustion products: Carbon monoxide and/or carbon dioxide.

Carbon monoxide is highly toxic if inhaled; carbon dioxide in sufficient concentrations can act as an asphyxiant.

**HAZARDOUS POLYMERIZATION:** Will Not Occur

**CONDITIONS TO AVOID:**

None known.

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**VII. SPILL OR LEAK PROCEDURES**

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**STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

Wear suitable protective equipment.

Small spills can be flushed with large amounts of water; larger spills should be collected for disposal.

Avoid runoff to sewers or waterways.

**WASTE DISPOSAL METHOD:**

Incinerate in a furnace where permitted under Federal, State, and local regulations.

At very low concentrations in water, this product is biodegradable in a biological wastewater treatment plant.

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**VIII. SPECIAL PROTECTION**

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**RESPIRATORY PROTECTION** (specify type): Use self-contained breathing apparatus in high vapor concentrations.

**VENTILATION:**

General (mechanical) room ventilation is expected to be satisfactory where this product is stored and handled in closed equipment.

Special, local ventilation is needed at points where vapors can be expected to escape to the workplace air.

**PROTECTIVE GLOVES:**

Butyl

**EYE PROTECTION:**

Safety Glasses or Monogoggles

**OTHER PROTECTIVE EQUIPMENT:**

Eye Bath, Safety Shower

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**IX. SPECIAL PRECAUTIONS**

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**PRECAUTIONS TO BE TAKEN IN HANDLING AND STORAGE:**

**WARNING!** Harmful if inhaled.

Causes eye and skin irritation.

Combustible.

Aspiration may cause lung damage.

Avoid breathing vapor.

Avoid contact with eyes, skin, and clothing.

Do not swallow.

Keep away from heat and flame.

Keep container closed.

Use with adequate ventilation.

Wash thoroughly after handling.

**FOR INDUSTRY USE ONLY**

**OTHER PRECAUTIONS:**

**PROCESS HAZARD:** Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperature and pressure, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published "autoignition" or "ignition" temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions.

Any use of this product in elevated-temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions. Further information is available in a technical bulletin entitled "Ignition Hazards of Organic Chemical Vapors."

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**X. REGULATORY INFORMATION**

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**STATUS ON SUBSTANCE LISTS:**

The concentrations shown are maximum or ceiling levels (weight %) to be used for calculations for regulations. Trade Secrets are indicated by "TS".

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#### FEDERAL EPA

Comprehensive Environmental Response Compensation, and Liability Act of 1980 (CERCLA) requires notification of the National Response Center of release of quantities of Hazardous Substances equal to or greater than the reportable quantities (RQs) in 40 CFR 302.4. Components present in this product at a level which could require reporting under the statute are: None

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Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires emergency planning based on Threshold Planning Quantities (TPQs) and release reporting based on Reportable Quantities (RQs) in 40 CFR 355 (used for SARA 302, 311 and 312). Components present in this product at a level which could require reporting under the statute are: None

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Superfund Amendments and Reauthorization Act of 1986 (SARA) Title III requires submission of annual reports of release of toxic chemicals that appear in 40 CFR 372 (for SARA 313). This information must be included in all MSDSs that are copied and distributed for this material. Components present in this product at a level which could require reporting under the statute are: None

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#### TSCA INVENTORY STATUS:

The ingredients of this product are on the TSCA inventory.

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#### STATE RIGHT-TO-KNOW

MASSACHUSETTS 105 CMR 670.000 Right-To-Know, Substance List (MSL) Hazardous Substances and Extraordinarily Hazardous Substances on the MSL must be identified when present in products. Components present in this product at a level, which could require reporting under the statute are: None

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PENNSYLVANIA Right-To-Know, Hazardous Substance List Hazardous Substances and Special Hazardous Substances on the List must be identified when present in products. Components present in this product at a level which could require reporting under the statute are:  
HAZARDOUS SUBSTANCES (=> 1%)  
UPPER BOUND  
CHEMICAL CAS NUMBER CONCENTRATION %  
2,6-Dimethyl-4-Heptanone 108-83-8 85

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CALIFORNIA SCAQMD RULE 443.1 VOC'S: To be determined

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OTHER REGULATORY INFORMATION: The information contained herein is based on data considered to be accurate based on the material as packaged. However, no warranty is expressed regarding the

accuracy of these data or the results to be obtained from the use thereof. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this MSDS. It is the user's obligation to determine the conditions of safe use of the product. While this MSDS is based on technical data judged to be reliable, PHARMCO-AAPER assumes not responsibility for the completeness or accuracy of the information contained herein.