



## SAFETY DATA SHEET

### DIISOBUTYL KETONE

#### 1. IDENTIFICATION OF THE SUBSTANCE OR MIXTURE AND OF THE SUPPLIER

Product name: DIISOBUTYL KETONE  
Recommended use: Chemical for industrial  
Manufacturer/Supplier: **MODERN CHEMICAL CO.,LTD.**  
82/80 Soi Ekamai 22 (Nuannoi), Sukhumvit 63,  
Klong Tan Nuea, Watthana, Bangkok 10110  
Telephone No: 0-2715-0897-9, 0-2392-3410-3  
Fax No: 0-2715-0908-9, 0-2391-1571-2  
Emergency Telephone No: 0-2715-0897-9, 0-2392-3410-3

#### 2. HAZARDS IDENTIFICATION

##### Label elements

Pictogram



Signal word

Danger

##### Hazard statement(s):

- 1.) Flammable liquid and vapour.
- 2.) May cause respiratory irritation.

##### Precautionary statement(s):

- 1.) Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
- 2.) Avoid breathing dust/fume/gas/mist/vapors/spray.
- 3.) IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.
- 4.) In case of fire: Use appropriate media for extinction.
- 5.) Store in a well-ventilated place. Keep container tight closed.
- 6.) Dispose of contents and container to appropriate waste site or reclaimer in accordance with local and national regulations.



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

**Synonym:** Di-iso-butyl ketone, 2,6-Dimethyl-4-heptanone, Isobutyl ketone, DIBK

Ingredients	% (w/w)	CAS NO.
DIISOBUTYL KETONE	100	108-83-8

### 4. FIRST AID MEASURES

- General advice:** Keep victim calm. Obtain medical treatment immediately.
- Inhalation:** Remove to fresh air. If rapid recovery does not occur, transport to nearest medical facility for additional treatment.
- Skin contact:** Remove contaminated clothing. Flush exposed area with water and follow by washing with soap if available.
- Eye contact:** Immediately flush eyes with large amounts of water for at least 15 minutes while holding eyelids open. Transport to the nearest medical facility for additional treatment.
- Ingestion:** If swallowed, do not induce vomiting: transport to nearest medical facility for additional treatment. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. If any of the following delayed signs and symptoms appear within the next 6 hours, transport to the nearest medical facility: fever greater than 101°F(38.3°C), shortness of breath, chest congestion or continued coughing or wheezing. If vomiting occurs spontaneously, keep head below hips to prevent aspiration. Give nothing by mouth. Do not induce vomiting.

### 5. FIRE-FIGHTING MEASURES

**Suitable extinguishing media:**

Alcohol-resistant foam, water spray or fog. Dry chemical powder, carbon dioxide, sand or earth may be used for small fires only.

**Unsuitable Extinguishing Media:**

No data available.

**Specific hazards arising from Chemicals:**

No data available.

**Special protective equipment for fire-fighters:**

Wear full protective clothing and self-contained breathing apparatus. Proper protective equipment including breathing apparatus must be worn when approaching a fire in a confined space.

**6. ACCIDENTAL RELEASE MEASURES****Personal precautions:**

Avoid contact with spilled or released material. Immediately remove all contaminated clothing. For guidance on selection of personal protective equipment see Chapter 8 of this Safety Data Sheet. For guidance on disposal of spilled material see Chapter 13 of this Safety Data Sheet. Shut off leaks, if possible without personal risks. Remove all possible sources of ignition in the surrounding area. Use appropriate containment (of product and fire fighting water) to avoid environmental contamination. Prevent from spreading or entering drains, ditches or rivers by using sand, earth, or other appropriate barriers. Attempt to disperse the vapour or to direct its flow to a safe location for example by using fog sprays. Take precautionary measures against static discharge. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Monitor area with combustible gas indicator.

**Environmental precautions:**

Notify authorities if any exposure to the general public or the environment occurs or is likely to occur. Local authorities should be advised if significant spillages cannot be contained. Vapour may form an explosive mixture with air. See Chapter 13 for information on disposal.

**Methods and Material for Containment and Clean Up:**

**For large liquid spills (> 1 drum),** transfer by mechanical means such as vacuum truck to a salvage tank for recovery or safe disposal. Do not flush away residues with water. Retain as contaminated waste. Allow residues to evaporate or soak up with an appropriate absorbent material and dispose of safely. Remove contaminated soil and dispose of safely.

**For small liquid spills (< 1 drum),** transfer by mechanical means to a labelled, sealable container for product recovery or safe disposal. Allow residues to



evaporate or soak up with an appropriate absorbent material and dispose of safely.

Remove contaminated soil and dispose of safely.

## 7. HANDING AND STORAGE

### Precautions for Safe Handling & Product Transfer:

Avoid inhaling vapor and/or mists. Avoid contact with skin, eyes, and clothing. Extinguish any naked flames. Do not smoke. Remove ignition sources. Avoid sparks. Electrostatic charges may be generated during pumping. Electrostatic discharge may cause fire. Ensure electrical continuity by bonding and grounding (earthing) all equipment. Restrict line velocity during pumping in order to avoid generation of electrostatic discharge ( $\leq 1$  m/sec until fill pipe submerged to twice its diameter, then  $\leq 7$  m/sec). Avoid splash filling. Do NOT use compressed air for filling, discharging, or handling operations.

### Conditions for Safe Storage & Unsuitable Materials:

Must be stored in a well-ventilated area, away from sunlight, ignition sources and other sources of heat. Keep away from aerosols, flammables, oxidizing agents, corrosives and from other flammable products which are not harmful or toxic to man or to the environment. The vapor is heavier than air. Beware of accumulation in pits and confined spaces. Vapors from tanks should not be released to atmosphere. Breathing losses during storage should be controlled by a suitable vapor treatment system. Bulk storage tanks should be diked (bundled).

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

**Occupational Exposure Limits:** TWA 25 ppm

### Appropriate Engineering Controls:

The level of protection and types of controls necessary will vary depending upon potential exposure conditions. Select controls based on a risk assessment of local circumstances. Appropriate measures include: Provide adequate ventilation in storage areas. Use sealed systems as far as possible. Adequate explosion-proof ventilation to control airborne concentrations below the exposure guidelines/limits. Local exhaust ventilation is recommended. Firewater monitors and deluge systems are recommended. Eye washes and showers for emergency use.

### Individual Protection Measures

**Respiratory protection:** If engineering controls do not maintain airborne concentrations to a level which is adequate to protect worker health, select respiratory protection equipment suitable for the specific conditions of use and meeting relevant legislation. Where air-



filtering respirators are suitable, select an appropriate combination of mask and filter. Select a filter suitable for organic gases and vapors [boiling point  $<65^{\circ}\text{C}$  ( $149^{\circ}\text{F}$ )] meeting EN371. Where respiratory protective equipment is required, use a full-face mask. Where air-filtering respirators are unsuitable(e.g., airborne concentrations are high, risk of oxygen deficiency, confined space) use appropriate positive pressure breathing apparatus.

**Hand protection:**

Suitability and durability of a glove is dependent on usage, e.g. frequency and duration of contact, chemical resistance of glove material, glove thickness, dexterity. Always seek advice from glove suppliers. Contaminated gloves should be replaced. Where hand contact with the product may occur the use of gloves approved to relevant standards made from the following materials may provide suitable chemical protection: Nitrile rubber. PVC. Viton.

**Eye protection:**

Chemical splash goggles (chemical monogoggles).

**Skin and body Protection:**

Use protective clothing which is chemical resistant to this material. Safety shoes and boots should also be chemical resistant.

**Hygiene measure:**

No data available.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

<b>Form, Color and Odor:</b> liquid, colourless, characteristic	<b>Evaporation rate :</b> N/A
<b>Melting Point:</b> N/A	<b>Specific gravity :</b> 0.800 – 0.820 g/cm <sup>3</sup> at 20 °C
<b>pH:</b> N/A	<b>Solubility in water :</b> N/A
<b>Boiling point :</b> 163-173 °C	<b>Viscosity :</b> N/A
<b>Vapour pressure :</b> N/A	<b>Vapour density :</b> N/A
<b>Lower explosion limits :</b> 0.8 %Vol	<b>Upper explosive limit :</b> 6.2 %Vol
<b>Auto-ignition temperature :</b> 345°C	<b>Flash point :</b> 47 °C
<b>Odour threshold :</b> N/A	<b>Flammability (solid, gas) :</b> N/A
<b>Decomposition temperature :</b> N/A	<b>Solubility in other solvents :</b> N/A
<b>n-octanol/water partition coefficient (log P<sub>ow</sub>) :</b> N/A	



## 10. STABILITY AND REACTIVITY

- Chemical Stability:** Stable under normal conditions of use.
- Reactions:** No data available.
- Possibility of Hazardous Reactions:** No data available.
- Conditions to avoid:** Avoid any source of ignition. Avoid contact with heat, sparks, open flame, and static discharge.
- Materials to be avoided:** Keep away from:., peroxides, oxidizing agents, strong acids, amines.
- Hazardous Decomposition Products:** Thermal decomposition is highly dependent on conditions. A complex mixture of airborne solids, liquids and gases, including carbon monoxide, carbon dioxide and other organic compounds will be evolved when this material undergoes combustion or thermal or oxidative degradation.

## 11. TOXICOLOGICAL INFORMATION

- Acute toxicity:** LD50 (Oral, rat): >2000 mg/kg  
LD50 (Dermal, rabbit): >2000 mg/kg  
LC50 (Inhalation, rat): >14.5 mg/l
- Sensitization:** Not expected to be a skin sensitiser.
- Chonic toxicity:** Carcinogenicity: Not expected to be carcinogenic.
- Further toxicological information:** No data available.

## 12. ECOLOGICAL INFORMATION

- Toxicity**
- Toxicity to fish: Harmful: LL/EL/IL50 >10 - <=100 mg/l
- Toxicity to daphnia and other aquatic invertebrates:  
Harmful: LL/EL/IL50 >10 - <=100 mg/l
- Toxicity to algae: Harmful: LL/EL/IL50 >10 - <=100 mg/l
- Toxicity to bacteria: No data available.
- Biodegradability remark: Not expected to bioaccumulate significantly.
- Bioaccumulative potential: Readily biodegradable.
- Mobility: If product enters soil, it will be mobile and may contaminate groundwater.
- Affected in any other way: No data available.



### 13. DISPOSAL CONSIDERATIONS

- Material Disposal:** Recover or recycle if possible. It is the responsibility of the waste generator to determine the toxicity and physical properties of the material generated to determine the proper waste classification and disposal methods in compliance with applicable regulations.
- Container Disposal:** Drain container thoroughly. After draining, vent in a safe place away from sparks and fire. Residues may cause an explosion hazard. Do not puncture, cut or weld uncleaned drums. Send to drum recoverer or metal reclaimer.

### 14. TRANSPORT INFORMATION

#### ADR/RID

No data available.

#### IMDG

UN-No: 1157

Class: 3

Packing group: III

Marine pollutant: No

Proper shipping name: Diisobutyl Ketone

#### IATA

UN-No: 1157

Class: 3

Packing group: III

Proper shipping name: Diisobutyl Ketone

### 15. REGULATORY INFORMATION

The regulatory information is not intended to be comprehensive. Other regulations may apply to this material.

- EC Label Name** : Diisobutyl Ketone
- EC Classification** : Flammable. Harmful
- EC Symbols** : Xn Harmful
- EC Risk Phrases** : R10 Flammable liquid.  
R37 Irritating to respiratory system.
- EC Safety Phrases** : S9 Keep container in a well-ventilated place.  
S16 Keep away from sources of ignition - No smoking.  
S23 Do not breathe vapor.  
S33 Take precautionary measures against static discharges.



## 16. OTHER INFORMATION

Modern Chemical Co.,Ltd. provides the information contained herein in good faith but makes no representation as to its comprehensive or accuracy. This document is intended only as a guide to the appropriate precautionary handling of the material by a properly trained person using this product. Individuals receiving the information must exercise their independent judgment in determining its appropriateness for a particular purpose.

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