1. PRODUCT AND COMPANY IDENTIFICATION

Product name : 2,6-Dimethyl-4-heptanone
Product Number : 273848
Brand : Aldrich
Supplier : Sigma-Aldrich
3050 Spruce Street
SAINT LOUIS MO 63103
USA
Telephone : +1 800-325-5832
Fax : +1 800-325-5052
Emergency Phone # (For both supplier and manufacturer) : (314) 776-6555
Preparation Information : Sigma-Aldrich Corporation
Product Safety - Americas Region
1-800-521-8956

2. HAZARDS IDENTIFICATION

Emergency Overview

OSHA Hazards
Target Organ Effect, Irritant

Target Organs
Central nervous system, Liver, Kidney

GHS Classification
Skin irritation (Category 3)
Serious eye damage (Category 1)
Specific target organ toxicity - single exposure (Category 3)

GHS Label elements, including precautionary statements

Pictogram

Signal word Danger

Hazard statement(s)
H316 Causes mild skin irritation.
H318 Causes serious eye damage.
H335 May cause respiratory irritation.

Precautionary statement(s)
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P280 Wear protective gloves/ eye protection/ face protection.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

HMIS Classification
Health hazard: 2
Chronic Health Hazard: *
Flammability: 0
Physical hazards: 0
NFPA Rating

| Health hazard: | 2 |
| Fire: | 0 |
| Reactivity Hazard: | 0 |

Potential Health Effects

- **Inhalation**: May be harmful if inhaled. Causes respiratory tract irritation.
- **Skin**: May be harmful if absorbed through skin. Causes skin irritation.
- **Eyes**: Causes eye irritation.
- **Ingestion**: May be harmful if swallowed.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

| Synonyms      | : Diisobutyl ketone  
|               |  
|               | Isovalerone |

| Formula      | : C₉H₁₈O |

| Molecular Weight | : 142.24 g/mol |

<table>
<thead>
<tr>
<th>Component</th>
<th>Classification</th>
<th>Concentration</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>2,6-Dimethylheptan-4-one</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CAS-No.</td>
<td>108-83-8</td>
<td></td>
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<tr>
<td>EC-No.</td>
<td>203-620-1</td>
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<tr>
<td>Index-No.</td>
<td>606-005-00-X</td>
<td></td>
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<tr>
<td></td>
<td>Flam. Liq. 3; STOT SE 3; H226, H335</td>
<td>60 - 100 %</td>
</tr>
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<td><strong>4,6-Dimethylheptan-2-one</strong></td>
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<tr>
<td>CAS-No.</td>
<td>19549-80-5</td>
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<tr>
<td>EC-No.</td>
<td>243-148-3</td>
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<tr>
<td></td>
<td>Flam. Liq. 3; H226</td>
<td>30 - 60 %</td>
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<tr>
<td><strong>3,3,5-Trimethylcyclohexan-1-one</strong></td>
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<td>CAS-No.</td>
<td>873-94-9</td>
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<tr>
<td>EC-No.</td>
<td>212-855-9</td>
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</tr>
<tr>
<td></td>
<td>Skin Irrit. 2; Eye Dam. 1; STOT SE 3; H315, H318, H335</td>
<td>5 - 10 %</td>
</tr>
</tbody>
</table>

For the full text of the H-Statements and R-Phrases mentioned in this Section, see Section 16

### 4. FIRST AID MEASURES

**General advice**
Consult a physician. Show this safety data sheet to the doctor in attendance. Move out of dangerous area.

**If inhaled**
If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

**In case of skin contact**
Wash off with soap and plenty of water. Consult a physician.

**In case of eye contact**
Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

**If swallowed**
Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

### 5. FIREFIGHTING MEASURES

**Conditions of flammability**
Not flammable or combustible.

**Suitable extinguishing media**
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**Special protective equipment for firefighters**
Wear self contained breathing apparatus for fire fighting if necessary.
Hazardous combustion products
Hazardous decomposition products formed under fire conditions. - Carbon oxides

6. ACCIDENTAL RELEASE MEASURES

Personal precautions
Use personal protective equipment. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas.

Environmental precautions
Do not let product enter drains.

Methods and materials for containment and cleaning up
Soak up with inert absorbent material and dispose of as hazardous waste. Keep in suitable, closed containers for disposal.

7. HANDLING AND STORAGE

Precautions for safe handling
Avoid contact with skin and eyes. Avoid inhalation of vapour or mist.

Conditions for safe storage
Keep container tightly closed in a dry and well-ventilated place. Containers which are opened must be carefully resealed and kept upright to prevent leakage.

8. EXPOSURE CONTROLS/PERSoNAL PROTECTION

Components with workplace control parameters

<table>
<thead>
<tr>
<th>Components</th>
<th>CAS-No.</th>
<th>Value</th>
<th>Control parameters</th>
<th>Basis</th>
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<tbody>
<tr>
<td>2,6-Dimethylheptan-4-one</td>
<td>108-83-8</td>
<td>TWA</td>
<td>25 ppm</td>
<td>USA. ACGIH Threshold Limit Values (TLV)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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<td>Remarks: Eye &amp; Upper Respiratory Tract irritation</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA</td>
</tr>
<tr>
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<td></td>
<td></td>
<td></td>
<td>The value in mg/m3 is approximate.</td>
</tr>
<tr>
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<td></td>
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<td>TWA</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>TWA</td>
</tr>
</tbody>
</table>

Personal protective equipment

Respiratory protection
Where risk assessment shows air-purifying respirators are appropriate use a full-face respirator with multi-purpose combination (US) or type ABEK (EN 14387) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Hand protection
Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove’s outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

Eye protection
Tightly fitting safety goggles. Faceshield (8-inch minimum). Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin and body protection
Complete suit protecting against chemicals. The type of protective equipment must be selected according to the
concentration and amount of the dangerous substance at the specific workplace.

**Hygiene measures**
Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

**Appearance**
- Form: liquid
- Colour: no data available

**Safety data**
- pH: no data available
- Melting point/freezing point: no data available
- Boiling point: 165 - 170 °C (329 - 338 °F) - lit.
- Flash point: no data available
- Ignition temperature: no data available
- Autoignition temperature: no data available
- Lower explosion limit: no data available
- Upper explosion limit: no data available
- Vapour pressure: no data available
- Density: 0.808 g/mL at 25 °C (77 °F)
- Water solubility: no data available
- Partition coefficient: n-octanol/water: no data available
- Relative vapour density: no data available
- Odour: no data available
- Odour Threshold: no data available
- Evaporation rate: no data available

### 10. STABILITY AND REACTIVITY

**Chemical stability**
Stable under recommended storage conditions.

**Possibility of hazardous reactions**
no data available

**Conditions to avoid**
no data available

**Materials to avoid**
Strong bases, Strong oxidizing agents, Strong acids, Strong reducing agents

**Hazardous decomposition products**
Hazardous decomposition products formed under fire conditions. - Carbon oxides
Other decomposition products - no data available

### 11. TOXICOLOGICAL INFORMATION
Acute toxicity

Oral LD50
no data available

Inhalation LC50
no data available

Dermal LD50
no data available

Other information on acute toxicity
no data available

Skin corrosion/irritation
no data available

Serious eye damage/eye irritation
Eyes: no data available

Respiratory or skin sensitization
no data available

Germ cell mutagenicity
no data available

Carcinogenicity

IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

ACGIH: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by ACGIH.

NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.

OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.

Reproductive toxicity
no data available

Teratogenicity
no data available

Specific target organ toxicity - single exposure (Globally Harmonized System)
no data available

Specific target organ toxicity - repeated exposure (Globally Harmonized System)
no data available

Aspiration hazard
no data available

Potential health effects

Inhalation May be harmful if inhaled. Causes respiratory tract irritation.
Ingestion May be harmful if swallowed.
Skin May be harmful if absorbed through skin. Causes skin irritation.
Eyes Causes eye irritation.

Signs and Symptoms of Exposure
To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

Synergetic effects
no data available
12. ECOLOGICAL INFORMATION

Toxicity
no data available

Persistence and degradability
no data available

Bioaccumulative potential
no data available

Mobility in soil
no data available

PBT and vPvB assessment
no data available

Other adverse effects
no data available

13. DISPOSAL CONSIDERATIONS

Product
Offer surplus and non-recyclable solutions to a licensed disposal company. Contact a licensed professional waste disposal service to dispose of this material.

Contaminated packaging
Dispose of as unused product.

14. TRANSPORT INFORMATION

DOT (US)
UN number: 1157  Class: 3  Packing group: III
Proper shipping name: Diisobutyl ketone
Marine pollutant: No
Poison Inhalation Hazard: No

IMDG
UN number: 1157  Class: 3  Packing group: III  EMS-No: F-E, S-D
Proper shipping name: DIISOBUTYL KETONE
Marine pollutant: No

IATA
UN number: 1157  Class: 3  Packing group: III
Proper shipping name: Diisobutyl ketone

15. REGULATORY INFORMATION

OSHA Hazards
Target Organ Effect, Irritant

SARA 302 Components
SARA 302: No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 313 Components
SARA 313: This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

SARA 311/312 Hazards
Acute Health Hazard, Chronic Health Hazard

Massachusetts Right To Know Components
2,6-Dimethylheptan-4-one 108-83-8 1993-04-24

Pennsylvania Right To Know Components

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<thead>
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New Jersey Right To Know Components

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California Prop. 65 Components
This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

16. OTHER INFORMATION

Text of H-code(s) and R-phrase(s) mentioned in Section 3

| Eye Dam. | Serious eye damage |
| Flam. Liq. | Flammable liquids |
| H226 | Flammable liquid and vapour. |
| H315 | Causes skin irritation. |
| H318 | Causes serious eye damage. |
| H335 | May cause respiratory irritation. |
| Skin Irrit. | Skin irritation |
| STOT SE | Specific target organ toxicity - single exposure |

Further information
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