

# DIETHYL KETONE FOR SYNTHESIS MSDS

CAS-No.: 96-22-0 MSDS

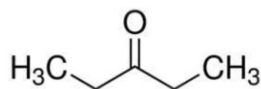


## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

#### 1.1. Product identifier

Product form : Substance  
:  
EC-No. : 202-490-3  
CAS-No. : 96-22-0  
Product code : B-01947  
Chemical structure :



#### 1.2. Relevant identified uses of the substance or mixture and uses advised against

##### 1.2.1. Relevant identified uses

Use of the substance/mixture : Laboratory chemicals, Manufacture of substances

##### 1.2.2. Uses advised against

No additional information available

#### 1.3. Details of the supplier of the safety data sheet

Bio-Chem Chemicals  
5455, Nicholson Road Science Market,  
Ambala Cantt. 133001 Haryana (India)  
+91-82952 41953  
[info@biofinechemical.com](mailto:info@biofinechemical.com) - [www.biofinechemical.com](http://www.biofinechemical.com)

#### 1.4. Emergency telephone number

Emergency number : +91 99921 51495 (10.00am - 06.30pm) (Office Hours)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

##### Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, H225  
Category 2  
Specific target organ H336  
toxicity — Single  
exposure, Category 3,  
Narcosis  
Specific target organ H335  
toxicity — Single  
exposure, Category 3,  
Respiratory tract irritation

Full text of hazard classes and H-statements : see section 16

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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### Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]

F; R11

Xi; R37

R66

R67

Full text of R-phrases: see section 16

### Adverse physicochemical, human health and environmental effects

No additional information available

## 2.2. Label elements

### Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP)

:



GHS02



GHS07

Signal word (CLP)

: Danger

Hazard statements (CLP)

: H225 - Highly flammable liquid and vapour.

H335 - May cause respiratory irritation.

H336 - May cause drowsiness or dizziness.

Precautionary statements (CLP)

: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

P261 - Avoid breathing vapours, dust, fume, gas.

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : DIETHYL KETONE For Synthesis

CAS-No. : 96-22-0

EC-No. : 202-490-3

Full text of R- and H-statements: see section 16

### 3.2. Mixtures

Not applicable

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### SECTION 4: First aid measures

#### 4.1. Description of first aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
- First-aid measures after skin contact : Rinse skin with water/shower. Take off immediately all contaminated clothing. Repeated exposure may cause skin dryness or cracking.
- First-aid measures after eye contact : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.
- First-aid measures after ingestion : Rinse mouth. Do not induce vomiting. Get medical advice/attention.

#### 4.2. Most important symptoms and effects, both acute and delayed

- Symptoms/effects after inhalation : May cause respiratory irritation. May cause drowsiness or dizziness.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

### SECTION 5: Firefighting measures

#### 5.1. Extinguishing media

- Suitable extinguishing media : Carbon dioxide. Dry powder. Foam. Water spray.
- Unsuitable extinguishing media : Do not use a heavy water stream.

#### 5.2. Special hazards arising from the substance or mixture

- Fire hazard : Highly flammable liquid and vapour.
- Explosion hazard : May form flammable/explosive vapour-air mixture.

#### 5.3. Advice for firefighters

- Protection during firefighting : Do not enter fire area without proper protective equipment, including respiratory protection.

### SECTION 6: Accidental release measures

#### 6.1. Personal precautions, protective equipment and emergency procedures

- General measures : Remove ignition sources. Use special care to avoid static electric charges. No open flames. No smoking.

##### 6.1.1. For non-emergency personnel

- Emergency procedures : Evacuate unnecessary personnel.

##### 6.1.2. For emergency responders

- Protective equipment : Use personal protective equipment as required.
- Emergency procedures : Ventilate area.

#### 6.2. Environmental precautions

Avoid release to the environment.

#### 6.3. Methods and material for containment and cleaning up

- Methods for cleaning up : On land, sweep or shovel into suitable containers. Collect spillage.

#### 6.4. Reference to other sections

No additional information available

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

- Additional hazards when processed : Handle empty containers with care because residual vapours are flammable.
- Precautions for safe handling : Keep away from sources of ignition - No smoking. Use only non-sparking tools. Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Do not breathe vapours.

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hygiene measures : Do not eat, drink or smoke when using this product. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

### 7.2. Conditions for safe storage, including any incompatibilities

Technical measures : Proper grounding procedures to avoid static electricity should be followed. Ground/bond container and receiving equipment.

Storage conditions : Keep in fireproof place. Keep container tightly closed.

Incompatible materials : Heat sources.

### 7.3. Specific end use(s)

No additional information available

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

No additional information available

### 8.2. Exposure controls

Hand protection : Protective gloves

Eye protection : Chemical goggles or safety glasses

Skin and body protection : Wear suitable protective clothing

Respiratory protection : Where exposure through inhalation may occur from use, respiratory protection equipment is recommended

## SECTION 9: Physical and chemical properties

### 9.1. Information on basic physical and chemical properties

Physical state : Liquid

Molecular mass : 86.13 g/mol

Colour : Colourless.

Odour : aromatic.

Odour threshold : No data available

pH : No data available

Relative evaporation rate (butylacetate=1) : No data available

Melting point : 101.5 °C

Freezing point : No data available

Boiling point : No data available

Flash point : 7 °C

Auto-ignition temperature : 450 °C

Decomposition temperature : No data available

Flammability (solid, gas) : Highly flammable liquid and vapour.

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

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|                                  |                         |
|----------------------------------|-------------------------|
| Vapour pressure                  | : 37.5 hPa at 20°C      |
| Relative vapour density at 20 °C | : No data available     |
| Relative density                 | : No data available     |
| Density                          | : 0.81 g/cm³ at 20°C    |
| Solubility                       | : Water: 50 g/l at 20°C |
| Log Pow                          | : No data available     |
| Viscosity, kinematic             | : No data available     |
| Viscosity, dynamic               | : No data available     |
| Explosive properties             | : No data available     |
| Oxidising properties             | : No data available     |
| Explosive limits                 | : No data available     |

### 9.2. Other information

No additional information available

## SECTION 10: Stability and reactivity

### 10.1. Reactivity

No additional information available

### 10.2. Chemical stability

Stable under normal conditions.

### 10.3. Possibility of hazardous reactions

No additional information available

### 10.4. Conditions to avoid

Open flame. Heat. Sparks.

### 10.5. Incompatible materials

No additional information available

### 10.6. Hazardous decomposition products

May release flammable gases.

## SECTION 11: Toxicological information

### 11.1. Information on toxicological effects

Acute toxicity : Not classified

Skin corrosion/irritation : Not classified

Additional information : Repeated exposure may cause skin dryness or cracking.

Serious eye damage/irritation : Not classified

Respiratory or skin sensitisation : Not classified

Germ cell mutagenicity : Not classified

Carcinogenicity : Not classified

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                       |                                                                        |
|-----------------------|------------------------------------------------------------------------|
| Reproductive toxicity | : Not classified                                                       |
| STOT-single exposure  | : May cause drowsiness or dizziness. May cause respiratory irritation. |

|                        |                  |
|------------------------|------------------|
| STOT-repeated exposure | : Not classified |
|------------------------|------------------|

|                   |                  |
|-------------------|------------------|
| Aspiration hazard | : Not classified |
|-------------------|------------------|

### SECTION 12: Ecological information

#### 12.1. Toxicity

No additional information available

#### 12.2. Persistence and degradability

No additional information available

#### 12.3. Bioaccumulative potential

No additional information available

#### 12.4. Mobility in soil

No additional information available

#### 12.5. Results of PBT and vPvB assessment

No additional information available

#### 12.6. Other adverse effects

No additional information available

### SECTION 13: Disposal considerations

#### 13.1. Waste treatment methods

|                                            |                                                                                                                                                               |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product/Packaging disposal recommendations | : Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. |
| Additional information                     | : Handle empty containers with care because residual vapours are flammable.                                                                                   |

### SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

#### 14.1. UN number

|               |        |
|---------------|--------|
| UN-No. (ADR)  | : 1156 |
| UN-No. (IMDG) | : 1156 |
| UN-No. (IATA) | : 1156 |
| UN-No. (ADN)  | : 1156 |
| UN-No. (RID)  | : 1156 |

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 14.2. UN proper shipping name

|                                       |                                             |
|---------------------------------------|---------------------------------------------|
| Proper Shipping Name (ADR)            | : DIETHYL KETONE                            |
| Proper Shipping Name (IMDG)           | : DIETHYL KETONE                            |
| Proper Shipping Name (IATA)           | : Diethyl ketone                            |
| Proper Shipping Name (ADN)            | : DIETHYL KETONE                            |
| Proper Shipping Name (RID)            | : DIETHYL KETONE                            |
| Transport document description (ADR)  | : UN 1156 DIETHYL KETONE, 3, II, (D/E)      |
| Transport document description (IMDG) | : UN 1156 DIETHYL KETONE, 3, II (13°C c.c.) |
| Transport document description (IATA) | : UN 1156 Diethyl ketone, 3, II             |
| Transport document description (ADN)  | : UN 1156 DIETHYL KETONE, 3, II             |
| Transport document description (RID)  | : UN 1156 DIETHYL KETONE, 3, II             |

### 14.3. Transport hazard class(es)

#### ADR

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADR) | : 3 |
| Danger labels (ADR)              | : 3 |



#### IMDG

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IMDG) | : 3 |
| Danger labels (IMDG)              | : 3 |



#### IATA

|                                   |     |
|-----------------------------------|-----|
| Transport hazard class(es) (IATA) | : 3 |
| Hazard labels (IATA)              | : 3 |



#### ADN

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (ADN) | : 3 |
| Danger labels (ADN)              | : 3 |



#### RID

|                                  |     |
|----------------------------------|-----|
| Transport hazard class(es) (RID) | : 3 |
|----------------------------------|-----|

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Danger labels (RID) : 3

:



### 14.4. Packing group

Packing group (ADR) : II

Packing group (IMDG) : II

Packing group (IATA) : II

Packing group (ADN) : II

Packing group (RID) : II

### 14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available

### 14.6. Special precautions for user

#### - Overland transport

Classification code (ADR) : F1

Limited quantities (ADR) : 1I

Excepted quantities (ADR) : E2

Packing instructions (ADR) : P001, IBC02, R001

Mixed packing provisions (ADR) : MP19

Portable tank and bulk container instructions (ADR) : T4

Portable tank and bulk container special provisions (ADR) : TP1

Tank code (ADR) : LGBF

Vehicle for tank carriage : FL

Transport category (ADR) : 2

Special provisions for carriage - Operation (ADR) : S2, S20

Hazard identification number (Kemler No.) : 33

Orange plates :



Tunnel restriction code (ADR) : D/E

EAC code : •3YE

#### - Transport by sea

Limited quantities (IMDG) : 1 L

Excepted quantities (IMDG) : E2

Packing instructions (IMDG) : P001

IBC packing instructions (IMDG) : IBC02

Tank instructions (IMDG) : T4

Tank special provisions (IMDG) : TP1

EmS-No. (Fire) : F-E

EmS-No. (Spillage) : S-D

Stowage category (IMDG) : B

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

|                                    |                                                                                                           |
|------------------------------------|-----------------------------------------------------------------------------------------------------------|
| Flash point (IMDG)                 | : 13°C c.c.                                                                                               |
| Properties and observations (IMDG) | : Colourless, mobile liquid. Flashpoint: 13°C c.c. Explosive limits: 1.6% to...<br>Immiscible with water. |
| MFAG-No                            | : 127                                                                                                     |

### - Air transport

|                                              |        |
|----------------------------------------------|--------|
| PCA Excepted quantities (IATA)               | : E2   |
| PCA Limited quantities (IATA)                | : Y341 |
| PCA limited quantity max net quantity (IATA) | : 1L   |
| PCA packing instructions (IATA)              | : 353  |
| PCA max net quantity (IATA)                  | : 5L   |
| CAO packing instructions (IATA)              | : 364  |
| CAO max net quantity (IATA)                  | : 60L  |
| ERG code (IATA)                              | : 3L   |

### - Inland waterway transport

|                                   |             |
|-----------------------------------|-------------|
| Classification code (ADN)         | : F1        |
| Limited quantities (ADN)          | : 1 L       |
| Excepted quantities (ADN)         | : E2        |
| Equipment required (ADN)          | : PP, EX, A |
| Ventilation (ADN)                 | : VE01      |
| Number of blue cones/lights (ADN) | : 1         |

### - Rail transport

|                                                           |                     |
|-----------------------------------------------------------|---------------------|
| Classification code (RID)                                 | : F1                |
| Limited quantities (RID)                                  | : 1L                |
| Excepted quantities (RID)                                 | : E2                |
| Packing instructions (RID)                                | : P001, IBC02, R001 |
| Mixed packing provisions (RID)                            | : MP19              |
| Portable tank and bulk container instructions (RID)       | : T4                |
| Portable tank and bulk container special provisions (RID) | : TP1               |
| Tank codes for RID tanks (RID)                            | : LGBF              |
| Transport category (RID)                                  | : 2                 |
| Colis express (express parcels) (RID)                     | : CE7               |
| Hazard identification number (RID)                        | : 33                |

### 14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

DIETHYL KETONE For Synthesis is not on the REACH Candidate List

DIETHYL KETONE For Synthesis is not on the REACH Annex XIV List

# DIETHYL KETONE For Synthesis

## Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

### 15.1.2. National regulations

#### Germany

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

#### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

#### Denmark

Class for fire hazard : Class I-1

Store unit : 1 liter

Classification remarks : F <Flam. Liq. 2>; Emergency management guidelines for the storage of flammable liquids must be followed

Recommendations Danish Regulation : Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Full text of R-, H- and EUH-statements:

|              |                                                                                            |
|--------------|--------------------------------------------------------------------------------------------|
| Flam. Liq. 2 | Flammable liquids, Category 2                                                              |
| STOT SE 3    | Specific target organ toxicity — Single exposure, Category 3, Narcosis                     |
| STOT SE 3    | Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation |
| H225         | Highly flammable liquid and vapour.                                                        |
| H335         | May cause respiratory irritation.                                                          |
| H336         | May cause drowsiness or dizziness.                                                         |
| R11          | Highly flammable                                                                           |
| R37          | Irritating to respiratory system                                                           |
| R66          | Repeated exposure may cause skin dryness or cracking                                       |
| R67          | Vapours may cause drowsiness and dizziness                                                 |
| F            | Highly flammable                                                                           |
| Xi           | Irritant                                                                                   |

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## Safety Data Sheet

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*This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product*