

**Butanone**  
**CAS No 78-93-3**

**MATERIAL SAFETY DATA SHEET**  
**SDS/MSDS**

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

**1.1 Product identifiers**

Product name : Butanone  
CAS-No. : 78-93-3

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

Identified uses : Laboratory chemicals, Industrial & for professional use only.

**1.3 Details of the supplier of the safety data sheet**

Company : Pallav Chemicals & Solvents Pvt. Ltd  
253, Shiv Shakti Industrial Estate, Opp Mittal Estate  
Andheri Kurla Road, Andheri (E), Mumbai - 400050  
INDIA  
Telephone : +91 22 4928 4000  
Email : [sales@pallavchemicals.com](mailto:sales@pallavchemicals.com)

**1.4 Emergency telephone number**

Emergency Phone # : +91 22 4928 4000 (9:00am - 6:00 pm) [Office hours]

**SECTION 2: Hazards identification**

**2.1 Classification of the substance or mixture**

**Classification according to Regulation (EC) No**

**1272/2008** Flammable liquids (Category 2), H225

Eye irritation (Category 2), H319

Specific target organ toxicity - single exposure (Category 3), Central nervous system,

H336 For the full text of the H-Statements mentioned in this Section, see Section 16.

**Classification according to EU Directives 67/548/EEC or 1999/45/EC**

F Highly flammable R11

Xi Irritant R36

R66

R67

For the full text of the R-phrases mentioned in this Section, see Section 16.

**2.2 Label elements**

**Labelling according Regulation (EC) No 1272/2008**

Pictogram

Signal word : Danger

Hazard statement(s)	
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
Precautionary statement(s)	
P210	Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
P261	Avoid breathing vapours.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Supplemental Hazard information (EU)	
EUH066	Repeated exposure may cause skin dryness or cracking.

### 2.3 Other hazards - none

## SECTION 3: Composition/information on ingredients

### 3.1 Substances

Molecular Weight	: 72,11 g/mol
CAS-No.	: 78-93-3
EC-No.	: 201-159-0
Index-No.	: 606-002-00-3
Formula	: C <sub>4</sub> H <sub>8</sub> O

#### Hazardous ingredients according to Regulation (EC) No 1272/2008

Component		Classification	Concentration
<b>Ethyl methyl ketone</b>			
CAS-No.	78-93-3	Flam. Liq. 2; Eye Irrit. 2; STOT	<= 100 %
EC-No.	201-159-0	SE 3; H225, H319, H336,	
Index-No.	606-002-00-3	EUH066	

#### Hazardous ingredients according to Directive 1999/45/EC

Component		Classification	Concentration
<b>Ethyl methyl ketone</b>			
CAS-No.	78-93-3	F, Xi, R11 - R36 - R66 - R67	<= 100 %
EC-No.	201-159-0		
Index-No.	606-002-00-3		

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

## 16 SECTION 4: First aid measures

### 4.1 Description of first aid measures

#### General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

#### 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

Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Consult a physician.

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

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11

- 4.3 Indication of any immediate medical attention and special treatment needed** no data available

#### **SECTION 5: Firefighting measures**

**5.1 Extinguishing media**

**Suitable extinguishing media**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2 Special hazards arising from the substance or mixture** Carbon oxides

**5.3 Advice for firefighters**

Wear self contained breathing apparatus for fire fighting if necessary.

**5.4 Further information**

Use water spray to cool unopened containers.

#### **SECTION 6: Accidental release measures**

**6.1 Personal precautions, protective equipment and emergency procedures**

Use personal protective equipment. Avoid breathing vapours, mist or gas. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Beware of vapours accumulating to form explosive concentrations. Vapours can accumulate in low areas. For personal protection see section 8.

**6.2 Environmental precautions**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

**6.3 Methods and materials for containment and cleaning up**

Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13).

**6.4 Reference to other sections**

For disposal see section 13.

#### **SECTION 7: Handling and storage**

**7.1 Precautions for safe handling**

Avoid contact with skin and eyes. Avoid inhalation of vapour or mist. Keep away from sources of ignition - No smoking. Take measures to prevent the build up of electrostatic charge. For precautions see section 2.2.

**7.2 Conditions for safe storage, including any incompatibilities**

Store in cool place. 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.

**7.3 Specific end use(s)**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

#### **SECTION 8: Exposure controls/personal protection**

**8.1 Control parameters**

**Components with workplace control parameters**

**8.2 Exposure controls**

**Appropriate engineering controls**

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

**Personal protective equipment**

**Eye/face protection**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

### **Skin 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.

### **Body Protection**

impervious clothing, Flame retardant antistatic protective clothing, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

### **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).

### **Control of environmental exposure**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains.

## **SECTION 9: Physical and chemical properties**

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

a) Appearance	Form: liquid, clear Colour: colourless
b) Odour	no data available
c) Odour Threshold	no data available
d) pH	no data available
e) Melting point/freezing point	-87 °C
f) Initial boiling point and boiling range	79 - 80 °C
g) Flash point	-3 °C - closed cup
h) Evaporation rate	no data available
i) Flammability (solid, gas)	no data available
j) Upper/lower flammability or explosive limits	Upper explosion limit: 10,1 %(V) Lower explosion limit: 1,8 %(V)
k) Vapour pressure	95 hPa at 20 °C
l) Vapour density	2,49 - (Air = 1.0)
m) Relative density	0,805 g/cm <sup>3</sup>
n) Water solubility	soluble
o) Partition coefficient: n-octanol/water	log Pow: 0,29
p) Auto-ignition temperature	no data available
q) Decomposition temperature	no data available
r) Viscosity	no data available
s) Explosive properties	no data available

t) Oxidizing properties      no data available

## 9.2 Other safety information

Surface tension      24,6 mN/m at 20 °C

Relative vapour density      2,49 - (Air = 1.0)

## SECTION 10: Stability and reactivity

### 10.1 Reactivity

no data available

### 10.2 Chemical stability

Stable under recommended storage conditions.

### 10.3 Possibility of hazardous reactions

no data available

### 10.4 Conditions to avoid

Heat, flames and sparks. Extremes of temperature and direct sunlight.

### 10.5 Incompatible materials

Oxidizing agents, Strong reducing agents

### 10.6 Hazardous decomposition products

In the event of fire: see section 5

## SECTION 11: Toxicological information

### 11.1 Information on toxicological effects

#### Acute toxicity

LD50 Oral - rat - 2.737 mg/kg

LC50 Inhalation - mouse - 4 h - 32.000 mg/m<sup>3</sup>

LC50 Inhalation - Mammal - 38.000 mg/m<sup>3</sup>

LD50 Dermal - rabbit - 6.480 mg/kg

#### Skin corrosion/irritation

Skin - rabbit

Result: No skin irritation

(OECD Test Guideline 404)

#### Serious eye damage/eye irritation

Eyes - rabbit

Result: Irritating to eyes.

(OECD Test Guideline 405)

#### Respiratory or skin sensitisation

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.

#### Reproductive toxicity

no data available

#### Specific target organ toxicity - single exposure

May cause drowsiness or dizziness.

#### Specific target organ toxicity - repeated exposure

no data available

**Aspiration hazard**

no data available

**Additional Information**

RTECS: Not available

Central nervous system depression, Gastrointestinal disturbance, narcosis

Liver - Irregularities - Based on Human Evidence

**SECTION 12: Ecological information****12.1 Toxicity**

Toxicity to fish mortality NOEC - Cyprinodon variegatus (sheepshead minnow) - 400 mg/l - 96 h

LC50 - Pimephales promelas (fathead minnow) - 3.130 - 3.320 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates LC50 - Daphnia magna (Water flea) - &gt; 520 mg/l - 48 h

EC50 - Daphnia magna (Water flea) - 7.060 mg/l - 24 h

**12.2 Persistence and degradability**

no data available

**12.3 Bioaccumulative potential**

no data available

**12.4 Mobility in soil**

no data available

**12.5 Results of PBT and vPvB assessment**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

**12.6 Other adverse effects**

no data available

**SECTION 13: Disposal considerations****13.1 Waste treatment methods****Product**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

**Contaminated packaging**

Dispose of as unused product.

**SECTION 14: Transport information****14.1 UN number**

ADR/RID: 1193

IMDG: 1193

IATA: 1193

**14.2 UN proper shipping name**

ADR/RID: ETHYL METHYL KETONE

IMDG: ETHYL METHYL KETONE

IATA: Ethyl methyl ketone

**14.3 Transport hazard class(es)**

ADR/RID: 3

IMDG: 3

IATA: 3

**14.4 Packaging group**

ADR/RID: II

IMDG: II

IATA: II

**14.5 Environmental hazards**

ADR/RID: no

IMDG Marine pollutant: no

IATA: no

#### 14.6 Special precautions for user

no data available

### SECTION 15: Regulatory information

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

no data available

#### 15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

### SECTION 16: Other information

#### Full text of H-Statements referred to under sections 2 and 3.

EUH066	Repeated exposure may cause skin dryness or cracking.
Eye Irrit.	Eye irritation
Flam. Liq.	Flammable liquids
H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
STOT SE	Specific target organ toxicity - single exposure

#### Full text of R-phrases referred to under sections 2 and 3

F	Highly flammable
Xi	Irritant
R11	Highly flammable.
R36	Irritating to eyes.
R66	Repeated exposure may cause skin dryness or cracking.
R67	Vapours may cause drowsiness and dizziness.

#### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. Pallav Chemicals & Solvents Pvt. Ltd and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product. See [www.pallavchemicals.com](http://www.pallavchemicals.com) for additional terms and conditions of sale.