

CHAITANYA CHS, 2<sup>nd</sup> FLOOR, OFFICE # 206, SIDDHARTH NAGAR, S.V.ROAD, GOREGAON (W), MUMBAI 400062, MH, INDIA.  
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## MATERIAL SAFETY DATA SHEET (MSDS)

### iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)

#### 1. Identification of the substance/mixture and of the company/undertaking

##### 1.1. Product identifier

Trade name : iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)  
 Product code : SS0103502500  
 Identification of the product : 4-Methylpentan-2-one  
 CAS No: 108-10-1  
 EC No :203-550-1  
 Annex No :606-004-00-4  
 Chemical formula : C<sub>6</sub>H<sub>12</sub>O

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

Use : Industrial. For professional use only.

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

Company identification : SUVCHEM  
 Chaitanya Tower, 2nd Floor, Office # 206,  
 Siddharth Nagar, S.V. Road,  
 Goregaon (West), Mumbai - 400062,  
 Maharashtra, India.  
 Contact: +91 22 28725393 / 94 / 95  
 Email ID: info@suvchem.com/care@suvchem.com

##### 1.4. Emergency telephone number

Phone no. : + 91 22 28725393 / 94 / 95 (9:00am - 6:00 pm) [ Office hours ]

#### 2. Hazards identification -DSD

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

##### Classification EC 67/548 or EC 1999/45

Classification : F; R11  
 Xn; R20  
 R66  
 Xi; R36/37

##### Hazard Class and Category Code(s), Regulation (EC) No 1272/2008 (CLP)

Health hazards : Specific Target Organ Toxicity - Single exposure - Respiratory tract irritation -  
 Category 3 - Warning (CLP : STOT SE 3) H335  
 Eye irritation - Category 2A - Warning (CLP : Eye Irrit. 2) H319  
 Acute toxicity, Inhalation - Category 4 - Warning (CLP : Acute Tox. 4) H332

**MATERIAL SAFETY DATA SHEET (MSDS)**
**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**
**2. Hazards identification -DSD (continued)**

**Physical hazards** : Flammable liquids - Category 2 - Danger (CLP : Flam. Liq. 2) H225

**2.2. Label elements**
**Labelling EC 67/548 or EC 1999/45**
**Symbol(s)**

**Symbol(s)**

: Xn : Harmful  
F : Highly flammable

**R Phrase(s)**

: R11 : Highly flammable.  
R20 : Harmful by inhalation.  
R36/37 : Irritating to eyes and respiratory system.  
R66 : Repeated exposure may cause skin dryness or cracking.

**S Phrase(s)**

: S2 : Keep out of the reach of children.  
S9 : Keep container in a well-ventilated place.  
S16 : Keep away from sources of ignition - No smoking.  
S29 : Do not empty into drains.

**Contains**

: 4-Methylpentan-2-one

**Labelling Regulation EC 1272/2008 (CLP)**
**Hazard pictograms**

**Signal words**

: Danger

**Hazard statements**

: H225 : Highly flammable liquid and vapour.  
H319 : Causes serious eye irritation.  
H332 : Harmful if inhaled.  
H335 : May cause respiratory irritation.

**Precautionary statements**
**• General**

: P102: Keep out of reach of children.  
P103: Read label before use.  
P101: If medical advice is needed, have product container or label at hand.

**• Prevention**

: P240: Ground/bond container and receiving equipment.  
P241: Use explosion-proof electrical, ventilating, lighting, ..., equipment.  
P210: Keep away from heat, sparks, open flames or hot surfaces. - No smoking.  
P280: Wear protective gloves, protective clothing, eye protection, face protection.  
P271: Use only outdoors or in a well-ventilated area.  
P261: Avoid breathing dust, fume, gas, mist, vapours, spray.  
P233: Keep container tightly closed.  
P264: Wash thoroughly after handling.

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## MATERIAL SAFETY DATA SHEET (MSDS)

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#### 2. Hazards identification -DSD (continued)

- **Response** : P305+P351+P338: IF IN EYES : Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
 P304+P340: IF INHALED : Remove to fresh air and keep at rest in a position comfortable for breathing.  
 P303+P361+P353: IF ON SKIN (or hair) : Remove immediately all contaminated clothing. Rinse skin with water/shower.  
 P337+P313: If eye irritation persists: Get medical advice/attention.  
 P370+P378: In case of fire: Use for extinction.
- **Storage** : P403+P233: Store in well-ventilated place. Keep container tightly closed.  
 P403+P235: Store in well-ventilated place. Keep cool.  
 P405: Store locked up.
- **Disposal considerations** : P501: Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
- Contains** : 4-Methylpentan-2-one

#### 2.3. Other hazards

- Other hazards** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

#### 3. Composition/information on ingredients

**Substance / Preparation** : 4-Methylpentan-2-one

EC No :203-550-1  
 Annex No :606-004-00-4  
 Substance.

Substance name	Contents	CAS No	EC No	Annex No	REACH Ref.	Classification
4-Methylpentan-2-one	100 %	108-10-1	203-550-1	606-004-00-4	----	F; R11 Xn; R20 R66 Xi; R36/37 ----- Flam. Liq. 2 _ H225 Acute Tox. 4 (inhal) _ H332 Eye irrit 2 _ H319 STOT SE 3 _ H335 STOT RE _ EUH066

Contains no other components or impurities which will influence the classification of the product.

#### 4. First aid measures

##### 4.1. Description of first aid measures

- Inhalation** : Remove to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor if you feel unwell.
- Skin contact** : Wash with plenty of soap and water. Remove/Take off immediately all contaminated clothing.

**MATERIAL SAFETY DATA SHEET (MSDS)**
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**4. First aid measures (continued)**

- Eye contact** : Get medical advice. If eye irritation persists : Remove contact lenses, if present and easy to do. Continue rinsing. Rinse cautiously with water for several minutes.
- Ingestion** : Obtain emergency medical attention. Do NOT induce vomiting. Rinse mouth.

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

- Symptoms relating to use** : Danger of serious damage to health by prolonged exposure through inhalation. Causes serious eye irritation. May cause respiratory irritation. Repeated exposure may cause skin dryness or cracking.

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

- General information** : Never give anything by mouth to an unconscious person. If you feel unwell, seek medical advice (show the label where possible).

**5. Fire-fighting measures**
**5.1. Extinguishing media**

- Suitable extinguishing media** : Foam. Dry powder. Carbon dioxide. Water spray. Sand.
- Unsuitable extinguishing media** : Do not use a heavy water stream.
- Surrounding fires** : Use water spray or fog for cooling exposed containers.

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

- Flammable class** : Highly flammable liquid and vapour.
- Hazardous combustion products** : Under fire conditions, hazardous fumes will be present.

**5.3. Advice for fire-fighters**

- Protection against fire** : Do not enter fire area without proper protective equipment, including respiratory protection.
- Special procedures** : Exercise caution when fighting any chemical fire. Avoid (reject) fire-fighting water to enter environment.

**6. Accidental release measures**
**6.1. Personal precautions, protective equipment and emergency procedures**

- For emergency responders** : Equip cleanup crew with proper protection. Ventilate area.
- Technical measures** : Use special care to avoid static electric charges.
- Special precautions** : Remove ignition sources. No naked lights. No smoking.

**MATERIAL SAFETY DATA SHEET (MSDS)**
**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**
**6. Accidental release measures (continued)**

**For non-emergency personnel** : Evacuate unnecessary personnel.

**6.2. Environmental precautions**

**Environmental precautions** : Prevent entry to sewers and public waters. Notify authorities if product enters sewers or public waters.

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

**Clean up methods** : Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Store away from other materials. Collect spillage.

**6.4. Reference to other sections**

See section 8. Exposure controls/personal protection

**7. Handling and storage**
**7.1. Precautions for safe handling**

**Handling** : Handle empty containers with care because residual vapours are flammable. Use only outdoors or in a well-ventilated area.  
Wash thoroughly after handling. Avoid breathing dust, fume, gas, mist, vapours, spray.

**Technical protective measures** : Provide good ventilation in process area to prevent formation of vapour. Proper grounding procedures to avoid static electricity should be followed. Use explosion-proof electrical, ventilating, lighting, ..., equipment.

**Special precautions** : No naked lights. No smoking. Avoid breathing dust, fume, gas, mist, vapours, spray.

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

**Storage** : Keep only in the original container in a cool, well ventilated place. Keep in fireproof place. Keep container tightly closed. Ground/bond container and receiving equipment.

**Storage - away from** : Strong bases. Strong acids. Sources of ignition. Direct sunlight. Heat sources.

**7.3. Specific end use(s)**

**Specific end use(s)** : None.

**8. Exposure controls/personal protection**
**8.1. Exposure controls**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**
**8. Exposure controls/personal protection (continued)**

<b>Personal protection</b>	: Avoid all unnecessary exposure.
• <b>Respiratory protection</b>	: In case of insufficient ventilation, wear suitable respiratory equipment.
• <b>Hand protection</b>	: Wear protective gloves.
• <b>Eye protection</b>	: Chemical goggles or safety glasses.
• <b>Others</b>	: When using, do not eat, drink or smoke.

**8.2. Control parameters**

<b>Occupational Exposure Limits</b>	: No data available.
<b>OEL (UK)-LTEL [ppm]</b>	: 50
<b>OEL (UK)-STEL [ppm]</b>	: 100

**9. Physical and chemical properties**
**9.1. Information on basic physical and chemical properties**

<b>Physical state at 20 °C</b>	: Liquid.
<b>Colour</b>	: Clear Colorless
<b>Odour</b>	: Slight camphor odor
<b>Odour threshold</b>	: No data available.
<b>pH value</b>	: No data available.
<b>Melting point [°C]</b>	: -80
<b>Decomposition point [°C]</b>	: N/A
<b>Critical temperature [°C]</b>	: N/A
<b>Auto-ignition temperature [°C]</b>	: 475
<b>Flammability (solid, gas)</b>	: Flammable. Highly flammable liquid and vapour.
<b>Flash point [°C]</b>	: 14
<b>Boiling point [°C]</b>	: 116
<b>Initial boiling point [°C]</b>	: 117°C
<b>Final boiling point [°C]</b>	: 118 °C
<b>Evaporation rate</b>	: N/A
<b>Vapour pressure [20°C]</b>	: 20 hPa at 20 °C
<b>Vapour pressure mm/Hg</b>	: 5.3 (20° C)
<b>Vapour density</b>	: 3,46
<b>Density [g/cm3]</b>	: 0.8
<b>Relative density, gas (air=1)</b>	: 3.5
<b>Relative density, liquid (water=1)</b>	: N/A
<b>Solubility in water [% weight]</b>	: 2 (20° C)

**MATERIAL SAFETY DATA SHEET (MSDS)**
**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**
**9. Physical and chemical properties (continued)**

Solubility in water	: N/A
Log Pow octanol / water at 20°C	: No data available.
Solubility	: N/A
Viscosity at 40°C [mm <sup>2</sup> /s]	: N/A

**9.2. Other information**

Explosive properties	: N/A
Explosion limits - upper [%]	: 8
Explosion limits - lower [%]	: 1.2
Oxidising properties	: No data available.

**10. Stability and reactivity**
**10.1. Reactivity**

Reactivity	: Not established.
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**10.2. Chemical stability**

Chemical stability	: Stable under recommended storage conditions.
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**10.3. Possibility of hazardous reactions**

Hazardous reactions	: Not established.
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**10.4. Conditions to avoid**

Conditions to avoid	: Direct sunlight. Extremely high or low temperatures. Open flame.
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**10.5. Incompatible materials**

Materials to avoid	: Strong acids. Strong bases.
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**10.6. Hazardous decomposition products**

Hazardous decomposition products	: Fumes. Carbon monoxide. Carbon dioxide. May release flammable gases.
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**11. Toxicological information**
**11.1. Information on toxicological effects**

**MATERIAL SAFETY DATA SHEET (MSDS)**
**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**
**11. Toxicological information (continued)**

<b>Acute toxicity</b>	
• Inhalation	: Harmful if inhaled.
• Dermal	: Based on available data, the classification criteria are not met.
• Ingestion	: Based on available data, the classification criteria are not met.
<b>Corrosion</b>	: Based on available data, the classification criteria are not met.
<b>Irritation</b>	: Causes serious eye irritation. May cause respiratory irritation. Repeated exposure may cause skin dryness or cracking.
<b>Sensitization</b>	: Based on available data, the classification criteria are not met.
<b>Mutagenicity</b>	: Based on available data, the classification criteria are not met.
<b>Carcinogenicity</b>	: Based on available data, the classification criteria are not met.
<b>Toxic for reproduction</b>	: Based on available data, the classification criteria are not met.
<b>STOT-single exposure</b>	: Based on available data, the classification criteria are not met.
<b>STOT-repeated exposure</b>	: Based on available data, the classification criteria are not met.
<b>Aspiration hazard</b>	: Based on available data, the classification criteria are not met.

**12. Ecological information**
**12.1. Toxicity.**

**Toxicity information** : Not established.

**12.2. Persistence - degradability.**

**Persistence - degradability** : Biodegradable.

**12.3. Bioaccumulative potential**

**Bioaccumulative potential** : Not established.

**12.4. Mobility in soil**

**Mobility in soil** : Not established.

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

**Results of PBT and vPvB assessment** : The substance does not fulfil the criteria to be identified as PBT substance or vPvB substance according to Annex XIII of Regulation REACH.

**12.6. Other adverse effects**

**Environmental precautions** : Avoid release to the environment.

**MATERIAL SAFETY DATA SHEET (MSDS)**
**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**
**13. Disposal considerations**
**13.1. Waste treatment methods**

<b>General</b>	: Avoid release to the environment. Dispose in a safe manner in accordance with local/national regulations. Dispose of this material and its container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation.
<b>Special precautions</b>	: Handle empty containers with care because residual vapours are flammable.

**14. Transport information**
**14.1. Land transport (ADR-RID)**

<b>Proper shipping name</b>	: METHYL ISOBUTYL KETONE
<b>UN N°</b>	: 1245
<b>H.I. nr</b>	: 33
<b>ADR - Class</b>	: 3
<b>Labelling - Transport</b>	: 3 : Flammable liquid.



<b>ADR - Classification code</b>	: F1
<b>ADR - Group</b>	: II
<b>ADR - Packing instructions</b>	: P001 R001
<b>ADR - Limited Quantity</b>	: 1 L
<b>ADR - Tunnel code</b>	



: D/E : Bulk or tank carriage: Passage forbidden through tunnels of category D and E. Other carriage: Passage forbidden through tunnels of category E.

**14.2. Sea transport (IMDG). [English only]**

<b>Proper shipping name</b>	: METHYL ISOBUTYL KETONE
<b>UN N°</b>	: 1245
<b>IMO-IMDG - Class or division</b>	: 3 : Flammable liquid.
<b>IMO-IMDG - Packing group</b>	: II
<b>IMO-IMDG - Packing instructions</b>	: P001
<b>IMO-IMDG - Limited quantities</b>	: 1 L

**MATERIAL SAFETY DATA SHEET (MSDS)**
**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**
**14. Transport information (continued)**

IMO-IMDG - Marine pollution : No  
 EMS-Nr : F-E S-D

**14.3. Air transport (ICAO-IATA) [English only]**

Proper shipping name : METHYL ISOBUTYL KETONE  
 UN N° : 1245  
 IATA - Class or division : 3 : Flammable liquid.  
 IATA - Packing group : II  
 IATA - Passenger and Cargo Aircraft : ALLOWED  
   - Passenger and Cargo - Packing instruction : 353  
   - Passenger and Cargo - Maximum Quantity/Packing : 5 L  
 IATA - Cargo only : ALLOWED  
   - Cargo only - Packing instruction : 364  
   - Cargo only - Maximum Quantity/Packing : 60 L  
 IATA - Limited Quantities : 1 L  
 ERG-Nr : 3L

**15. Regulatory information**
**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture**

Safety, health and environmental regulations/legislation specific for the substance or mixture : Ensure all national/local regulations are observed.  
 REACH Restrictions - Annex XVII : The components of this product are not subject to restrictions.  
 REACH Authorisation - Annex XIV : The components of this product are not subject to authorization.

**15.2. Chemical Safety Assessment**

Chemical Safety Assessment : It has not been carried out.

**16. Other information**

Revision : Revision - See : \*  
 Abbreviations and acronyms : PBT: persistent, bioaccumulative and toxic.  
   vPvB: very persistent and very bioaccumulative  
 Sources of key data used : REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and

**MATERIAL SAFETY DATA SHEET (MSDS)**

**iso-BUTYL METHYL KETONE LR (METHYL-iso-BUTYL KETONE)**

In accordance with REACH Regulation (CE) N° 1907/2006 and with CLP Regulation (CE) N° 1272/2008

**DISCLAIMER:**

- **SUVCHEM** Products are to be used as Lab Chemicals for R&D only. Not for drug, medicinal, household or other uses.
- **SUVCHEM** shall not be responsible for any damage resulting from handling or from contact with the above product.
- **SUVCHEM** provides the information contained herein in good faith but makes no representation as to its comprehensiveness 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.

**End of document**