

## Chemical Safety Data Sheet MSDS / SDS

## 4-methylpent-1-ene SDS

Revision Date:2024-04-25 Revision Number:1

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

Product name: 4-methylpent-1-ene

CAS: 691-37-2

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

Relevant identified uses: For R&amp;D use only. Not for medicinal, household or other use.

Uses advised against: none

**Company Identification**

Company: Chemicalbook.in

Address: 5 vasavi Layout Basaveswara Nilayam Pragathi Nagar Hyderabad, India -500090

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**SECTION 2: Hazards identification****Classification of the substance or mixture**

Flammable liquids, Category 2

## GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H225 Highly flammable liquid and vapour

### Precautionary statement(s)

#### Prevention

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

P233 Keep container tightly closed.

P240 Ground and bond container and receiving equipment.

P241 Use explosion-proof [electrical/ventilating/lighting/...] equipment.

P242 Use non-sparking tools.

P243 Take action to prevent static discharges.

P280 Wear protective gloves/protective clothing/eye protection/face protection/hearing protection/...

#### Response

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water [or shower].

P370+P378 In case of fire: Use ... to extinguish.

#### Storage

P403+P235 Store in a well-ventilated place. Keep cool.

#### Disposal

P501 Dispose of contents/container to an appropriate treatment and disposal facility in accordance with applicable laws and regulations, and product characteristics at time of disposal.

#### Other hazards which do not result in classification

no data available

## SECTION 3: Composition/information on ingredients

**Substance**

|                            |                    |
|----------------------------|--------------------|
| Chemical name:             | 4-methylpent-1-ene |
| Common names and synonyms: | 4-methylpent-1-ene |
| CAS number:                | 691-37-2           |
| EC number:                 | 211-720-1          |
| Concentration:             | 100%               |

**SECTION 4: First aid measures****Description of necessary first-aid measures****If inhaled**

Move the victim into fresh air. If breathing is difficult, give oxygen. If not breathing, give artificial respiration and consult a doctor immediately. Do not use mouth to mouth resuscitation if the victim ingested or inhaled the chemical.

**Following skin contact**

Take off contaminated clothing immediately. Wash off with soap and plenty of water. Consult a doctor.

**Following eye contact**

Rinse with pure water for at least 15 minutes. Consult a doctor.

**Following ingestion**

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Call a doctor or Poison Control Center immediately.

**Most important symptoms/effects, acute and delayed**

Harmful if inhaled or swallowed. Vapor or mist is irritating to the eyes, mucous membrane and upper respiratory tract. Causes skin irritation. Symptoms of exposure may include burning sensation, coughing, wheezing, laryngitis, shortness of breath, headache, nausea and vomiting. (USCG, 1999)

**Indication of immediate medical attention and special treatment needed, if necessary**

no data available

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Fire Extinguishing Agents Not to Be Used: Water may be ineffective. Fire Extinguishing Agents: Carbon dioxide, dry chemical, alcohol foam. (USCG, 1999)

### Specific hazards arising from the chemical

Special Hazards of Combustion Products: Vapors may travel considerable distance to source of ignition and flashback. Container explosion may occur under fire conditions. Forms explosive mixtures in air. (USCG, 1999)

### Special protective actions for fire-fighters

Wear self-contained breathing apparatus for firefighting if necessary.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Avoid dust formation. Avoid breathing mist, gas or vapours. Avoid contacting with skin and eye. Use personal protective equipment. Wear chemical impermeable gloves. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Keep people away from and upwind of spill/leak.

### Environmental precautions

Prevent further spillage or leakage if it is safe to do so. Do not let the chemical enter drains. Discharge into the environment must be avoided.

### Methods and materials for containment and cleaning up

Collect and arrange disposal. Keep the chemical in suitable and closed containers for disposal. Remove all sources of ignition. Use spark-proof tools and explosion-proof equipment. Adhered or collected material should be promptly disposed of, in accordance with appropriate laws and regulations.

## SECTION 7: Handling and storage

### Precautions for safe handling

Handling in a well ventilated place. Wear suitable protective clothing. Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Use non-sparking tools. Prevent fire caused by electrostatic discharge steam.

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

Store the container tightly closed in a dry, cool and well-ventilated place. Store apart from foodstuff containers or incompatible materials.

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

#### **Control parameters**

#### **Occupational Exposure limit values**

no data available

#### **Biological limit values**

no data available

#### **Appropriate engineering controls**

Ensure adequate ventilation. Handle in accordance with good industrial hygiene and safety practice. Set up emergency exits and the risk-elimination area.

#### **Individual protection measures, such as personal protective equipment (PPE)**

##### **Eye/face protection**

Wear tightly fitting safety goggles with side-shields conforming to EN 166(EU) or NIOSH (US).

##### **Skin protection**

Wear fire/flame resistant and impervious clothing. Handle with gloves. Gloves must be inspected prior to use. Wash and dry hands. The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

##### **Respiratory protection**

If the exposure limits are exceeded, irritation or other symptoms are experienced, use a full-face respirator.

##### **Thermal hazards**

no data available

## SECTION 9: Physical and chemical properties and safety characteristics

|   |  |
|---|--|
| Physical state:   | Liquid.  |
| Colour:   | Colourless.  |
| Odour:  | no data available  |
| Melting point/freezing point:                             | Remarks:Since no peak thought to represent endothermic reaction associated with melting was observed in the DSC curve of the test substance, the melting point of the test substance is not considered to be within the range of measured temperatures (-50 to -120°). |
| Boiling point or initial boiling point and boiling range: | $\geq 54$ °C.  |
| Flammability:   | no data available  |
| Lower and upper explosion limit/flammability limit:       | no data available  |
| Flash point:  | -24 °C. Atm. press.:101.325 kPa.   |
| Auto-ignition temperature:                                | 320 °C. Atm. press.: $\geq 101.28$ - $\leq 102.04$ kPa. Remarks:Room temperature 19 to 20 degrees Centigrade.  |
| Decomposition temperature:                                | no data available  |
| pH:   | no data available  |
| Kinematic viscosity:                                      | no data available  |
| Solubility:   | In water: 34.1 mg/L. Temperature:20 °C. pH: $\geq 6.2$ - $\leq 6.3$ . Remarks:Maximum difference between measured values was calculated as 9.97 %.   |
| Partition coefficient n-octanol/water:                    | $\log P_{ow} = 3.38$ .   |

|                                  |                              |
|----------------------------------|------------------------------|
| Vapour pressure:                 | 37.7 kPa. Temperature:25 °C. |
| Density and/or relative density: | 0.66. Temperature:20 °C.     |
| Relative vapour density:         | >1 (vs air)                  |
| Particle characteristics:        | no data available            |

## SECTION 10: Stability and reactivity

### Reactivity

Highly flammable. Water insoluble.

### Chemical stability

no data available

### Possibility of hazardous reactions

The unsaturated aliphatic hydrocarbons, such as 4-METHYL-1-PENTENE, are generally much more reactive than the alkanes. Strong oxidizers may react vigorously with them. Reducing agents can react exothermically to release gaseous hydrogen. In the presence of various catalysts (such as acids) or initiators, compounds in this class can undergo very exothermic addition polymerization reactions.

### Conditions to avoid

no data available

### Incompatible materials

no data available

### Hazardous decomposition products

no data available

## SECTION 11: Toxicological information

### Acute toxicity

Oral: LD50 - rat (female) - > 2 000 mg/kg bw.

Inhalation: no data available

Dermal: no data available

### Skin corrosion/irritation

no data available

### Serious eye damage/irritation

no data available

### Respiratory or skin sensitization

no data available

### Germ cell mutagenicity

no data available

### Carcinogenicity

no data available

### Reproductive toxicity

no data available

### STOT-single exposure

no data available

### STOT-repeated exposure

no data available



### Aspiration hazard

no data available

## SECTION 12: Ecological information

### Toxicity

Toxicity to fish: LC50 - *Oryzias latipes* - > 0.076 mg/L - 96 h.

Toxicity to daphnia and other aquatic invertebrates: EC50 - *Daphnia magna* - > 0.082 mg/L - 48 h.

Toxicity to algae: EC50 - *Pseudokirchneriella subcapitata* (previous names: *Raphidocelis subcapitata*, *Selenastrum capricornutum*) - > 0.093 mg/L - 72 h.

Toxicity to microorganisms: no data available

### Persistence and degradability

no data available

### Bioaccumulative potential

no data available

### Mobility in soil

no data available

### Other adverse effects

no data available

## SECTION 13: Disposal considerations

### Disposal methods

#### Product

The material can be disposed of by removal to a licensed chemical destruction plant or by controlled incineration with flue gas scrubbing. Do not contaminate water, foodstuffs, feed or seed by storage or disposal. Do not discharge to sewer systems.

### **Contaminated packaging**

Containers can be triply rinsed (or equivalent) and offered for recycling or reconditioning. Alternatively, the packaging can be punctured to make it unusable for other purposes and then be disposed of in a sanitary landfill. Controlled incineration with flue gas scrubbing is possible for combustible packaging materials.

## **SECTION 14: Transport information**

### **UN Number**

ADR/RID: UN2288 (For reference only, please check.)

IMDG: UN2288 (For reference only, please check.)

IATA: UN2288 (For reference only, please check.)

### **UN Proper Shipping Name**

ADR/RID: ISOHEXENES (For reference only, please check.)

IMDG: ISOHEXENES (For reference only, please check.)

IATA: ISOHEXENES (For reference only, please check.)

### **Transport hazard class(es)**

ADR/RID: 3 (For reference only, please check.)

IMDG: 3 (For reference only, please check.)

IATA: 3 (For reference only, please check.)

### **Packing group, if applicable**

ADR/RID: II (For reference only, please check.)

IMDG: II (For reference only, please check.)

IATA: II (For reference only, please check.)

### **Environmental hazards**

ADR/RID: No

IMDG: No

IATA: No

### **Special precautions for user**

no data available

**Transport in bulk according to IMO instruments**

no data available

## **SECTION 15: Regulatory information**

**Safety, health and environmental regulations specific for the product in question**

**European Inventory of Existing Commercial Chemical Substances (EINECS)**

Listed.

**EC Inventory**

Listed.

**United States Toxic Substances Control Act (TSCA) Inventory**

Listed.

**China Catalog of Hazardous chemicals 2015**

Listed.

**New Zealand Inventory of Chemicals (NZIoC)**

Listed.

**(PICCS)**

Listed.

**Vietnam National Chemical Inventory**

Listed.

**IECSC)**

Listed.

**Korea Existing Chemicals List (KECL)**

Listed.

## SECTION 16: Other information

### Abbreviations and acronyms

CAS: Chemical Abstracts Service

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road

RID: Regulation concerning the International Carriage of Dangerous Goods by Rail

IMDG: International Maritime Dangerous Goods

IATA: International Air Transportation Association

TWA: Time Weighted Average

STEL: Short term exposure limit

LC50: Lethal Concentration 50%

LD50: Lethal Dose 50%

EC50: Effective Concentration 50%

### References

IPCS - The International Chemical Safety Cards (ICSC), website: <http://www.ilo.org/dyn/icsc/showcard.home>

HSDB - Hazardous Substances Data Bank, website: <https://toxnet.nlm.nih.gov/newtoxnet/hsdb.htm>

IARC - International Agency for Research on Cancer, website: <http://www.iarc.fr/>

eChemPortal - The Global Portal to Information on Chemical Substances by OECD, website:  
[http://www.echemportal.org/echemportal/index?pageID=0&request\\_locale=en](http://www.echemportal.org/echemportal/index?pageID=0&request_locale=en)

CAMEO Chemicals, website: <http://cameochemicals.noaa.gov/search/simple>

ChemIDplus, website: <http://chem.sis.nlm.nih.gov/chemidplus/chemidlite.jsp>

ERG - Emergency Response Guidebook by U.S. Department of Transportation, website:  
<http://www.phmsa.dot.gov/hazmat/library/erg>

Germany GESTIS-database on hazard substance, website: <http://www.dguv.de/ifa/gestis/gestis-stoffdatenbank/index-2.jsp>

ECHA - European Chemicals Agency, website: <https://echa.europa.eu/>

properties of the product. We as supplier shall not be held liable for any