

## Chemical Safety Data Sheet MSDS / SDS

## 2,4,4-trimethylpent-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: 2,4,4-trimethylpent-1-ene

CAS: 107-39-1

**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

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

Flammable liquids, Category 2

Hazardous to the aquatic environment, long-term (Chronic) - Category Chronic 2

## GHS label elements, including precautionary statements

Pictogram(s)



Signal word

Danger

### Hazard statement(s)

H225 Highly flammable liquid and vapour

H411 Toxic to aquatic life with long lasting effects

### 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/...

P273 Avoid release to the environment.

#### 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.

P391 Collect spillage.

#### 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:	2,4,4-trimethylpent-1-ene
Common names and synonyms:	2,4,4-trimethylpent-1-ene
CAS number:	107-39-1
EC number:	203-486-4
Concentration:	100%

### SECTION 4: First aid measures

#### Description of necessary first-aid measures

##### If inhaled

Fresh air, rest. Artificial respiration may be needed. Refer for medical attention.

##### Following skin contact

Remove contaminated clothes. Rinse skin with plenty of water or shower. Refer for medical attention .

##### Following eye contact

First rinse with plenty of water for several minutes (remove contact lenses if easily possible), then refer for medical attention.

##### Following ingestion

Rinse mouth. Give a slurry of activated charcoal in water to drink. Do NOT induce vomiting. Refer for medical attention .

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

Low general toxicity; may act as simple asphyxiant in high vapor concentrations. (USCG, 1999)

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

no data available

## SECTION 5: Firefighting measures

### Suitable extinguishing media

Foam, carbon dioxide, dry chemical ...

### Specific hazards arising from the chemical

Excerpt from ERG Guide 128 [Flammable Liquids (Water-Immiscible)]: HIGHLY FLAMMABLE: Will be easily ignited by heat, sparks or flames. Vapors may form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Most vapors are heavier than air. They will spread along ground and collect in low or confined areas (sewers, basements, tanks). Vapor explosion hazard indoors, outdoors or in sewers. Those substances designated with a (P) may polymerize explosively when heated or involved in a fire. Runoff to sewer may create fire or explosion hazard. Containers may explode when heated. Many liquids are lighter than water. Substance may be transported hot. For hybrid vehicles, ERG Guide 147 (lithium ion batteries) or ERG Guide 138 (sodium batteries) should also be consulted. If molten aluminum is involved, refer to ERG Guide 169. (ERG, 2016)

### Special protective actions for fire-fighters

Use powder, foam, carbon dioxide. In case of fire: keep drums, etc., cool by spraying with water. Combat fire from a sheltered position.

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures

Evacuate danger area! Personal protection: self-contained breathing apparatus. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### Environmental precautions

Evacuate danger area! Personal protection: self-contained breathing apparatus. Do NOT wash away into sewer. Do NOT let this chemical enter the environment. Collect leaking and spilled liquid in sealable containers as far as possible. Absorb remaining liquid in sand or inert absorbent. Then store and dispose of according to local regulations.

### 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

NO open flames, NO sparks and NO smoking. Closed system, ventilation, explosion-proof electrical equipment and lighting. Prevent build-up of electrostatic charges (e.g., by grounding). Do NOT use compressed air for filling, discharging, or 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

Fireproof. Separated from strong oxidants. Cool. Keep in a well-ventilated room. STORAGE TEMPERATURE: AMBIENT; VENTING: OPEN (FLAME ARRESTER) OR PRESSURE-VACUUM.

## 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 safety spectacles or eye protection in combination with breathing protection.

#### Skin protection

Protective gloves.

### **Respiratory protection**

Use ventilation, local exhaust or breathing protection.

### **Thermal hazards**

no data available

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

Physical state:	Diisobutylene, isomeric compounds is a clear colorless liquid with a petroleum-like odor. Flash point 10°F. Less dense than water and insoluble in water. Vapors heavier than air. Used in the manufacture of other chemicals.
Colour:	Colorless liquid
Odour:	GASOLINE-LIKE ODOR
Melting point/freezing point:	-93°C(lit.)
Boiling point or initial boiling point and boiling range:	100°C
Flammability:	Highly flammable. Heating will cause rise in pressure with risk of bursting.
Lower and upper explosion limit/flammability limit:	Lower flammable limit: 0.8% by volume; Upper flammable limit: 4.8% by volume
Flash point:	-7°C(lit.)
Auto-ignition temperature:	788° F (USCG, 1999)
Decomposition temperature:	no data available
pH:	no data available

Kinematic viscosity:	no data available
Solubility:	Insoluble in water. Soluble in ethyl ether, benzene, carbon tetrachloride
Partition coefficient n-octanol/water:	log Kow= 4.55
Vapour pressure:	25.7mmHg at 25°C
Density and/or relative density:	0.719g/cm <sup>3</sup>
Relative vapour density:	3.8 (AIR= 1)
Particle characteristics:	no data available

## SECTION 10: Stability and reactivity

### Reactivity

Reacts violently with oxidants.  
Reacts with oxidants.

### Chemical stability

no data available

### Possibility of hazardous reactions

**FIRE HAZARD: DANGEROUS, WHEN EXPOSED TO HEAT OR FLAME; CAN REACT VIGOROUSLY WITH OXIDIZING MATERIALS.** The vapour is heavier than air and may travel along the ground; distant ignition possible. As a result of flow, agitation, etc., electrostatic charges can be generated., The vapour is heavier than air and may travel along the ground; distant ignition possible. DIISOBUTYLENE may react vigorously with strong oxidizing agents. May react exothermically with reducing agents to release hydrogen gas.

### Conditions to avoid

no data available

**Incompatible materials**

Mixing diisobutylene /with chlorosulfonic acid, oleum, or 96% sulfuric acid/ ... in a closed container caused temperature & pressure to increase.

**Hazardous decomposition products**

no data available

**SECTION 11: Toxicological information****Acute toxicity**

Oral: no data available

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**

The substance is irritating to the eyes, skin and respiratory tract. Exposure to high concentrations could cause unconsciousness.

#### **STOT-repeated exposure**

no data available

#### **Aspiration hazard**

A harmful contamination of the air can be reached very quickly on evaporation of this substance at 20°C.

## **SECTION 12: Ecological information**

### **Toxicity**

Toxicity to fish: no data available

Toxicity to daphnia and other aquatic invertebrates: no data available

Toxicity to algae: no data available

Toxicity to microorganisms: no data available

### **Persistence and degradability**

2,2,4-Trimethyl-1-pentene is expected to biodegrade slowly in soil and water based upon no biodegradation in the Japanese MITI test(1).

### **Bioaccumulative potential**

An estimated log BCF of 2.80 was calculated for 2,4,4-trimethyl-1-pentene(SRC), using an estimated log Kow of 4.55(1) and a regression-derived equation(2). According to a classification scheme(3), this BCF suggests the potential for bioconcentration in aquatic organisms is high.

### **Mobility in soil**

Using a structure estimation method based on molecular connectivity indices(1), the Koc for 2,4,4-trimethyl-1-pentene can be estimated to be about 275(SRC). According to a classification scheme(2), this estimated Koc value suggests that 2,4,4-trimethyl-1-

pentene is expected to have moderate mobility in soil.

#### **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: UN2050 (For reference only, please check.)

IMDG: UN2050 (For reference only, please check.)

IATA: UN2050 (For reference only, please check.)

#### **UN Proper Shipping Name**

ADR/RID: DIISOBUTYLENE, ISOMERIC COMPOUNDS (For reference only, please check.)

IMDG: DIISOBUTYLENE, ISOMERIC COMPOUNDS (For reference only, please check.)

IATA: DIISOBUTYLENE, ISOMERIC COMPOUNDS (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: Yes

IMDG: Yes

IATA: Yes

**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)**

Not 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/>

### **Other Information**

Health effects of exposure to the substance have not been investigated.

Disclaimer: 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. We as supplier shall not be held liable for any