

# 2,2,4-TRIMETHYL PENTANE 'DRY' AR MSDS

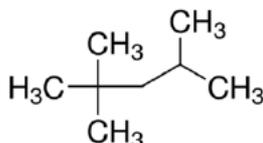
CAS-No.: 540-84-1 MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

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

#### 1.1. Product identifier

Product form : Substance  
:  
CAS-No. : 540-84-1  
Product code : 00353  
Chemical structure :



Synonyms : Isooctane

#### 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

Labogens Fine Chem Industries  
1st Floor , Above Bank of India, Guru Vihar , Rahon Road,  
Ludhiana Pb. (141007)  
+91 9316777775, +91 7707855700  
[sales@labogens.com](mailto:sales@labogens.com) - [www.Labogens.com](http://www.Labogens.com)

#### 1.4. Emergency telephone number

Emergency number : +91 7707855700 (9:00am - 6:00 pm)

### 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  
Skin corrosion/irritation, H315  
Category 2  
Specific target organ H336  
toxicity — Single  
exposure, Category 3,  
Narcosis  
Aspiration hazard, H304  
Category 1  
Hazardous to the aquatic H410  
environment — Chronic  
Hazard, Category 1

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## Safety Data Sheet

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

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

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

F; R11  
Xn; R65  
Xi; R38  
N; R50/53  
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

GHS08

GHS09

Signal word (CLP) :

Danger

Hazard statements (CLP) :

H225 - Highly flammable liquid and vapour.  
H304 - May be fatal if swallowed and enters airways.  
H315 - Causes skin irritation.  
H336 - May cause drowsiness or dizziness.  
H410 - Very toxic to aquatic life with long lasting effects.

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.  
P273 - Avoid release to the environment.  
P301+P310 - IF SWALLOWED: Immediately call a doctor.  
P331 - Do NOT induce vomiting.  
P501 - Dispose of contents/container to an approved waste disposal plant

## 2.3. Other hazards

No additional information available

## SECTION 3: Composition/information on ingredients

### 3.1. Substances

Name : 2,2,4-TRIMETHYL PENTANE 'DRY' AR  
CAS-No. : 540-84-1

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

### 3.2. Mixtures

Not applicable

## 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 | : Wash with plenty of water/.... Wash contaminated clothing before reuse. Get medical advice/attention.  |
| 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    | : Immediately call a POISON CENTER/doctor. Rinse mouth.  |

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

|                                     |   |
|-------------------------------------|---|
| Symptoms/effects after inhalation   | : May cause drowsiness or dizziness.            |
| Symptoms/effects after skin contact | : Causes skin irritation.                       |
| Symptoms/effects after ingestion    | : May be fatal if swallowed and enters airways. |

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

No additional information available

## SECTION 5: Firefighting measures

### 5.1. Extinguishing media

|                                |  |
|--------------------------------|--|
| Suitable extinguishing media   | : Carbon dioxide. Dry powder. Foam. Water spray.   |
| Unsuitable extinguishing media | : Do not use extinguishing media containing water. |

### 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

Very toxic to aquatic life with long lasting effects.

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

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

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### 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     | : Avoid contact with skin and eyes. Use only non-sparking tools. Keep away from sources of ignition - No smoking. Use only outdoors or in a well-ventilated area. Do not breathe vapours. |
| 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. [In case of inadequate ventilation] wear respiratory protection. |

## SECTION 9: Physical and chemical properties

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

- |  |                     |
|--|---------------------|
| Physical state                             | : Liquid            |
| Colour                                     | : Clear Colorless.  |
| Odour                                      | : benzene-like.     |
| Odour threshold                            | : No data available |
| pH   | : No data available |
| Relative evaporation rate (butylacetate=1) | : No data available |
| Melting point                              | : -107.45 °C        |

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|                                  |  |
|----------------------------------|--|
| Freezing point                   | : No data available                                |
| Boiling point                    | : 98 - 99 °C                                       |
| Flash point                      | : -12 °C   |
| Auto-ignition temperature        | : 418 °C   |
| Decomposition temperature        | : No data available                                |
| Flammability (solid, gas)        | : Flammable<br>Highly flammable liquid and vapour. |
| Vapour pressure                  | : 5.4 kPa (at 20°C)                                |
| Relative vapour density at 20 °C | : 3.93   |
| Relative density                 | : 0.69194  |
| Density                          | : 0.69194 g/cm <sup>3</sup>                        |
| Solubility                       | : Water: Insoluble in cold water                   |
| Log Pow                          | : 4.6  |
| Viscosity, kinematic             | : No data available                                |
| Viscosity, dynamic               | : No data available                                |
| Explosive properties             | : No data available                                |
| Oxidising properties             | : No data available                                |
| Explosive limits                 | : 0.01 - 0.06 vol %                                |

### 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

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|                                   |   |
|-----------------------------------|---|
| Skin corrosion/irritation         | : Causes skin irritation.                       |
| Serious eye damage/irritation     | : Not classified                                |
| Respiratory or skin sensitisation | : Not classified                                |
| Germ cell mutagenicity            | : Not classified                                |
| Carcinogenicity                   | : Not classified                                |
| Reproductive toxicity             | : Not classified                                |
| STOT-single exposure              | : May cause drowsiness or dizziness.            |
| STOT-repeated exposure            | : Not classified                                |
| Aspiration hazard                 | : May be fatal if swallowed and enters airways. |

### SECTION 12: Ecological information

#### 12.1. Toxicity

Ecology - water : Very toxic to aquatic life with long lasting effects.

#### 12.2. Persistence and degradability

##### 2,2,4-TRIMETHYL PENTANE 'DRY' AR (540-84-1)

|                               |   |
|-------------------------------|---|
| Persistence and degradability | May cause long-term adverse effects in the environment. |
|-------------------------------|---|

#### 12.3. Bioaccumulative potential

##### 2,2,4-TRIMETHYL PENTANE 'DRY' AR (540-84-1)

|         |     |
|---------|-----|
| Log Pow | 4.6 |
|---------|-----|

#### 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.   |

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Ecology - waste materials : Hazardous waste due to toxicity.

### SECTION 14: Transport information

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

#### 14.1. UN number

UN-No. (ADR) : 1262  
UN-No. (IMDG) : 1262  
UN-No. (IATA) : 1262  
UN-No. (ADN) : 1262  
UN-No. (RID) : 1262

#### 14.2. UN proper shipping name

Proper Shipping Name (ADR) : OCTANES  
Proper Shipping Name (IMDG) : OCTANES  
Proper Shipping Name (IATA) : Octanes  
Proper Shipping Name (ADN) : OCTANES  
Proper Shipping Name (RID) : OCTANES  
Transport document description (ADR) : UN 1262 OCTANES, 3, II, (D/E), ENVIRONMENTALLY HAZARDOUS  
Transport document description (IMDG) : UN 1262 OCTANES, 3, II, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS  
Transport document description (IATA) : UN 1262 Octanes, 3, II, ENVIRONMENTALLY HAZARDOUS  
Transport document description (ADN) : UN 1262 OCTANES, 3, II, ENVIRONMENTALLY HAZARDOUS  
Transport document description (RID) : UN 1262 OCTANES, 3, II, ENVIRONMENTALLY HAZARDOUS

#### 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



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### ADN

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



### RID

Transport hazard class(es) (RID) : 3  
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 : Yes  
Marine pollutant : Yes  
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 :



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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) : TP2  
EmS-No. (Fire) : F-E  
EmS-No. (Spillage) : S-E  
Stowage category (IMDG) : B  
Properties and observations (IMDG) : Colourless liquids. Explosive limits: 1% to 6.5% ISOCTANE: flashpoint-12°C c.c. n-OCTANE: flashpoint 13°C c.c. Immiscible with water.  
MFAG-No : 128

### - 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) : 3H

### - Inland waterway transport

Classification code (ADN) : F1  
Limited quantities (ADN) : 1 L  
Excepted quantities (ADN) : E2  
Carriage permitted (ADN) : T  
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

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### 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

2,2,4-TRIMETHYL PENTANE 'DRY' AR is not on the REACH Candidate List

2,2,4-TRIMETHYL PENTANE 'DRY' AR is not on the REACH Annex XIV List

##### 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

Classification remarks : 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:

|                   |   |
|-------------------|---|
| Aquatic Chronic 1 | Hazardous to the aquatic environment — Chronic Hazard, Category 1 |
| Asp. Tox. 1       | Aspiration hazard, Category 1                                     |
| Flam. Liq. 2      | Flammable liquids, Category 2                                     |
| Skin Irrit. 2     | Skin corrosion/irritation, Category 2                             |

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|           |   |
|-----------|---|
| STOT SE 3 | Specific target organ toxicity — Single exposure, Category 3, Narcosis                          |
| H225      | Highly flammable liquid and vapour.   |
| H304      | May be fatal if swallowed and enters airways.   |
| H315      | Causes skin irritation.   |
| H336      | May cause drowsiness or dizziness.  |
| H410      | Very toxic to aquatic life with long lasting effects.   |
| R11       | Highly flammable  |
| R38       | Irritating to skin  |
| R50/53    | Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment |
| R65       | Harmful: may cause lung damage if swallowed   |
| R67       | Vapours may cause drowsiness and dizziness  |
| F         | Highly flammable  |
| N         | Dangerous for the environment   |
| Xi        | Irritant  |
| Xn        | Harmful   |

*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*