

Product Code: ISO-TNE
Product Name: Terpinolene

Issue date 08-May-2014

Revision date 14-Jun-2018

Version 3

1. Identification of the substance | preparation | company | undertaking

Product identifier

Product name Terpinolene

Other means of identification

Product code ISO-TNE
UN/ID no N/A
Synonyms N/A

Recommended use of the chemical and restrictions on use

Recommended Use Industry Use.
Uses advised against No information available

Details of the supplier of the safety data sheet

Supplier Address

324 Airport Industrial Dr. Ypsilanti, MI 48198

Emergency telephone number

Company Phone Number Use CHEMTREC instead of Emergency Phone Number
24 Hour Emergency Phone Number (800) 424-9300
Emergency telephone

2. Hazard Identification

Classification

Skin sensitization	Category 1B
Aspiration toxicity	Category 1
Flammable liquids	Category 4

Label Elements

DANGER

Hazard Statements:

May cause an allergic skin reaction
May be fatal if swallowed and enters airways
Combustible Liquid

Appearance Clear	Physical state Liquid	Odor Characteristic Odor
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Precautionary Statements - Prevention

Avoid breathing dust/fume/gas/mist/vapors/spray. Contaminated work clothing must not be allowed out of the workplace. Keep away from flames and hot surfaces. - No smoking. Wear protective gloves/eye protection/face protection.

Precautionary Statements - Response

Specific treatment (see .? on this label).

IF ON SKIN: Wash with plenty of water and soap. If skin irritation or rash occurs: Get medical advice/attention. Wash contaminated clothing before reuse.

IF SWALLOWED: Immediately call a POISON CENTER or doctor. Do NOT induce vomiting.

In case of fire: Use CO₂, dry chemical, or foam to extinguish.

Precautionary Statements - Storage

Store locked up. Store in a well-ventilated place. Keep cool.

Precautionary Statements - Disposal

Dispose of contents/container to an approved waste disposal plant.

Hazards not otherwise classified (HNOC)**Other Information**

- May be harmful if swallowed
- Causes mild skin irritation
- Very toxic to aquatic life with long lasting effects
- Very toxic to aquatic life

100 % of the mixture consists of ingredient(s) of unknown toxicity

3. Composition/information on Ingredients

Chemical Family Aliphatic hydrocarbons.
Formula C₁₀H₁₆

Chemical Name	CAS No.	Weight-%
Terpinolene	586-62-9	100

4. First Aid Measures

Description of first aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.

Skin contact Remove contaminated clothing and shoes. Wash off immediately with soap and plenty of water. Wash contaminated clothing before reuse. Consult a physician if necessary.

Inhalation Move to fresh air in case of accidental inhalation of vapors. If breathing is difficult, give oxygen. If not breathing, give artificial respiration.

Ingestion Do not induce vomiting without medical advice. Clean mouth with water. Never give anything by mouth to an unconscious person. Get medical attention.

Most important symptoms and effects, both acute and delayed

Symptoms No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically.

5. Fire-Fighting Measures

Suitable Extinguishing Media

Use CO₂, dry chemical, or foam.

Unsuitable extinguishing media .

Specific hazards arising from the chemical

Combustible material.

Hazardous combustion products Irritating or toxic substances may be emitted upon burning, combustion, or decomposition.

Explosion data

Sensitivity to Mechanical Impact None.

Sensitivity to Static Discharge None.

Special protective actions for fire-fighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

6. Accidental Release Measures

Personal precautions, protective equipment and emergency procedures

Personal precautions

Ensure adequate ventilation, especially in confined areas. Avoid contact with skin, eyes and inhalation of vapors. Wear protective gloves/protective clothing and eye/face protection. Wash thoroughly after handling.

Environmental precautions

Environmental precautions

See Section 12 for additional Ecological Information. Do not flush into surface water or sanitary sewer system. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for Containment

Contain and collect spillage with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see Section 13).

Methods for cleaning up

Cover liquid spill with sand, earth or other non-combustible absorbent material. Sweep up and shovel into suitable containers for disposal.

7. Handling and Storage

Precautions for safe handling

Advice on safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation, especially in confined areas. Wash thoroughly after handling. When using do not eat, drink or smoke.

Conditions for safe storage, including any incompatibilities

Storage Conditions

Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from sunlight. Keep locked up and out of reach of children.

Incompatible materials

None known based on information supplied.

8. Exposure Controls/Personal Protection

Control parameters

Exposure guidelines This product, as supplied, does not contain any hazardous materials with occupational exposure limits established by the region specific regulatory bodies.

Appropriate engineering controls

Engineering controls Showers
Eyewash stations
Ventilation systems.

Individual protection measures, such as personal protective equipment

Eye/Face Protection Avoid contact with eyes. Wear safety glasses with side shields (or goggles).

Skin and Body Protection Avoid contact with skin. Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Respiratory protection If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations. Ensure adequate ventilation, especially in confined areas.

General hygiene considerations Wash contaminated clothing before reuse.

9. Physical and Chemical Properties

Information on basic physical and chemical properties

Physical state	Liquid	Odor	Characteristic Odor
Appearance	Clear	Odor threshold	Not applicable
Color	Colorless to Pale Yellow		

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	
Melting point / freezing point	-29.5 °C	
Boiling point / boiling range	185 °C	
Flash Point	61 °C / 142 °F	
Evaporation Rate	Not applicable	
Flammability (solid, gas)	Not applicable	
Flammability Limit in Air		
Upper flammability limit:	Not applicable	
Lower flammability limit:	Not applicable	
Vapor pressure	Not applicable	
Vapor Density	Not applicable	
Specific gravity	Not applicable	
Water solubility	slightly soluble	
Solubility in other solvents	Not applicable	
Partition coefficient	Not applicable	
Autoignition Temperature	Not applicable	
Decomposition temperature	Not applicable	
Kinematic viscosity	No data available	
Dynamic viscosity	Not applicable	
Explosive properties	Not applicable	
Oxidizing properties	Not applicable	

Other Information

Softening point	not applicable
Molecular weight	136.24
VOC content (%)	Not applicable
Density	Not applicable
Bulk Density	Not applicable

10. Stability and Reactivity

No data available

Chemical stability

Stable under recommended storage conditions.

Possibility of Hazardous Reactions

None under normal processing.

Conditions to avoid

Extremes of temperature and direct sunlight.

Incompatible materials

None known based on information supplied.

Hazardous Decomposition Products

None known based on information supplied.

11. Toxicological Information

Information on likely routes of exposure

Product Information

Inhalation	Avoid breathing vapors or mists.
Eye Contact	Avoid contact with eyes.
Skin contact	Avoid contact with skin. Causes mild skin irritation. May cause an allergic skin reaction.
Ingestion	May be harmful if swallowed. May be fatal if swallowed and enters airways.

Information on toxicological effects

Symptoms No information available.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Skin corrosion/irritation	Causes mild skin irritation.
Sensitization	May cause sensitization by skin contact.
Germ cell mutagenicity	Not classified.
Carcinogenicity	This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
Reproductive toxicity	This product does not contain any known or suspected reproductive hazards above the threshold value.
STOT - single exposure	Not classified.
STOT - repeated exposure	Not classified.
Aspiration hazard	May be fatal if swallowed and enters airways.

Numerical measures of toxicity - Product Information

Unknown acute toxicity 100 % of the mixture consists of ingredient(s) of unknown toxicity
The following values are calculated based on chapter 3.1 of the GHS document .
ATEmix (oral) 3775 mg/kg

12. Ecological Information

This product contains a chemical which is listed as a severe marine pollutant according to DOT.

Ecotoxicity

Very toxic to aquatic life with long lasting effects

0 % of the mixture consists of component(s) of unknown hazards to the aquatic environment

Persistence and degradability

No information available.

Bioaccumulation

No information available.

Other adverse effects

No information available

13. Disposal Considerations

Waste treatment methods

Disposal of wastes Disposal should be in accordance with applicable regional, national and local laws and regulations.

Contaminated packaging Do not reuse container.

14. Transport Information

DOT

UN/ID no	2541
Proper Shipping Name	Terpinolene
Hazard Class	3
Packing group	III
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to DOT.

IATA

UN/ID no	2541
Proper Shipping Name	Terpinolene
Hazard Class	3
Packing group	III

IMDG

UN/ID no	2541
Proper Shipping Name	Terpinolene
Hazard Class	3
Packing group	III
Marine pollutant	This product contains a chemical which is listed as a severe marine pollutant according to IMDG/IMO

15. Regulatory Information

US Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden release of pressure hazard	No
Reactive Hazard	No

CWA (Clean Water Act)

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42)

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material

US State Regulations**U.S. State Right-to-Know Regulations**

This product contains substance(s) regulated by state right-to-know regulations

Chemical Name	New Jersey	Massachusetts	Pennsylvania	Rhode Island
Terpinolene 586-62-9	X			

U.S. EPA Label information

EPA Pesticide registration number Not applicable

16. Other Information

Issue date 08-May-2014

Revision date 14-Jun-2018

Revision note
No information available

Disclaimer

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. Classification and labeling according to the IFRA/IOFI Labeling Manual 2017.

End of Safety Data Sheet