

Safety Data Sheet – Terpineol (alpha)

(Complies with OSHA HCS-2012: 29 CFR 1910.1200)

1. Product and Company Identification

Product Name	Terpineol (alpha), Alpha Terpineol 98
Other Product Name(s)	3-Cyclohexene-1-methanol, .alpha.,.alpha.,4-trimethyl-
Product Use	For use in flavors, fragrances, and industrial uses.
Manufacturer	Swati Menthol & Allied Chemicals, Ltd. Bareilly Road, P.O; Modipur, Rampur, India Phone: 91-595-2357042 (to 45, 4 lines) Fax: 91-595-2357046 Email: info@swatimenthol.com
Supplier	R.E. Carroll, Inc. 1570 North Olden Avenue Trenton, NJ 08638-3204 USA Phone: (800)-257-9365 (609)-695-6211 Fax: (609)-695-0102 SDS Contact: John Boruta Email: johnb@recarroll.com
Emergency Telephone Number	CHEMTREC: 800-424-9300

2. Hazards Identification

Emergency Overview: A colorless liquid with a pine or lilac odor. Can irritate the skin and eyes.
Combustible liquid.

OSHA Regulatory Status	Hazardous
OSHA Classification	Skin corrosion/irritation: 2 Serious eye damage/irritation 2B Flammable liquid: 4
WHMIS Regulatory Status	Hazardous (WHMIS 2015)
WHMIS Classification	Skin corrosion/irritation: 2 Serious eye damage/irritation 2B Flammable liquid: 4
Signal Word	WARNING
Hazard Statements	Causes skin irritation. Causes eye irritation. Combustible liquid.
Precautionary Statements	Keep away from flames and hot surfaces. – No smoking. Wash skin thoroughly after handling. Wear eye protection/ face protection. Wear protective gloves. IF ON SKIN: Wash with plenty of soap and water. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If skin irritation occurs: Get medical advice/ attention. If eye irritation persists: Get medical advice/ attention. Take off contaminated clothing and wash before reuse. In case of fire: use dry chemical (small fires) or water fog or foam (larger fires.). Store in a well- ventilated place. Keep cool. Dispose of in accordance with Federal and local regulations.
Label Symbols	
Other Hazards Not Specified by OSHA	None
% of Unknown Toxicity	None

Potential Health Effects:

Skin	Can cause irritation.
Eyes	Can cause irritation.
Ingestions	Not highly toxic but may cause upset to digestive tract.
Inhalation	Mists and vapors may be slightly irritating.
Chronic Effects	None
Environmental Effects	May affect aquatic environment – chronic toxicity.

3. Composition / Information on Ingredients

Ingredient	CAS #	Wt. %*
Terpineol	98-55-5	98-100

4. First Aid Measures

Skin	Wash with soap and water. Get medical attention if irritation develops.
Eyes	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation develops get medical attention.
Ingestions	If you feel unwell contact a doctor or poison control center.
Inhalation	Remove to fresh air.
Advice to Physician	Treat symptomatically.

5. Fire Fighting Measures

Extinguishing Media:	Use dry chemical, foam, or water spray. Avoid solid stream of water.
Fire/Explosion Hazards:	Liquid can burn (combustible) but not highly likely to develop explosive mixtures with air.
Fire Fighting Procedures:	Use self-contained supplied air breathing apparatus. Avoid contact with skin and eyes.
Flammable Limits:	Not determined
Flash Point	194 °F (90 °C) (CC method)
Auto ignition Temperature:	Not determined
Hazardous Combustion Products:	Carbon monoxide, carbon dioxide, and various organic compounds in smoke.

6. Accidental Release Measures

Personal Precautions:	Wear personal protective equipment. (See section 8). Do not breathe product mists or vapors and avoid direct contact. Ventilate area and remove sources of ignition.
Containment:	Use clay or other impervious materials to surround large spills.
Clean Up:	Vacuum up and place into container for disposal. Material can also be absorbed with liquid binding materials such as kitty litter. Absorbent then needs to be disposed of.
Notification Requirements:	Not required.

7. Handling and Storage

Handling:	Use electrically grounded equipment for storage and handling. Avoid contact with material. Do not eat or smoke before washing thoroughly.
Storage:	Store in a cool dry place and keep containers closed. Ground storage container. Avoid sources of ignition. Keep containers tightly closed to protect product quality. Store in light-resistant containers.

8. Exposure Controls / Personal Protection

Engineering Controls:	Local ventilation sufficient to avoid escape of vapors.
------------------------------	---

Personal Protective Equipment:

Eyes and Face:	Wear safety glasses or goggles to avoid accidental eye contact.
Respiratory:	Not normally required for adequately ventilated work areas.
Hands, Arms, and Body:	Use work gloves made of nitrile rubber 0.4 mm thick. Wear normal work clothing. Long sleeved shirts are recommended. Add rubber apron when transferring liquid between containers.
Other	Eyewash or source of running water in case of accidental exposure.

Exposure Guidelines:

Ingredient	ACGIH TLW	ACGIH STEL	OSHA PEL	OSHA STEL
No ingredients with established exposure guidelines	---	---	---	---

9. Physical and Chemical Properties

Appearance & Physical State	Colorless liquid
Odor:	Pine or lilac odor
Odor Threshold:	Not determined
pH	Not determined
Specific Gravity (Relative density):	0.933 @ 20 °C
Initial Boiling Point & Range:	Boils at 413 °F (212 °C) Range: 417-435 °F (214-224 °C)
Melting Point /Freezing Point:	-32.60 – -18.74 °F (-35.89 – -28.19 °C)
Evaporation Rate:	Not determined
Percent Volatile:	100 %
Solubility in Water	Very slight solubility. 2.54 g/l at 20 °C (68 °F)
Vapor Density:	5.3
Vapor Pressure:	10 mmHg at 20 °C (68 °F)
Upper/ Lower Flammable Limits:	Not determined
Flash Point	194 °F (90 °C) (CC method)
Auto ignition Temperature:	Not determined
Flammability (solid, gas)	Not determined
Octanol/water partition coefficient	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined

10. Stability and Reactivity

Stability:	Stable at normal handling conditions
Conditions to Avoid:	High temperatures and prolonged exposure to air.
Materials to avoid	May react with strong oxidizers.
Hazardous Polymerization:	Will not occur.
Hazardous Decomposition Products	Not determined but may include oxides of carbon and organic compounds.

11. Toxicological Information

Eye:	Can cause irritation.
Skin:	Can cause irritation. LD ₅₀ (rabbit) 3000 mg/kg
Oral:	May cause upset stomach. LD ₅₀ (rat) is 4300 mg/kg
Inhalation:	Slightly irritating. LC ₅₀ Inhalation - Rat - male and female - 4 h - > 4.76 mg/l
Chronic:	None

Ingredients found on established carcinogen lists:

Ingredient	NTP Status	IARC Statue	OSHA List
None listed	---	---	---

12. Ecological Information

Acute ecotoxicity:	Semi-static test LC50 - Danio rerio (zebra fish) - ca. 62.80 mg/l - 96 h Static test LC50 - Pseudokirchneriella subcapitata (green algae) - ca. 68 mg/l
Chronic ecotoxicity	May cause long term damage to the aquatic environment.
Other information	aerobic - Exposure time 28 d Result: 80 % - Readily biodegradable

13. Disposal Considerations

RCRA Status	Not a hazardous waste.
Disposal Method:	Dispose of in accordance with Federal, State and Local regulations.

14. Transportation Considerations

DOT Proper Shipping Name:	Not regulated
DOT Primary Hazard Class	Not applicable
DOT UN / NA Number:	Not applicable
DOT Packing Group	Not applicable
TDG (Canada)	Not regulated
IMDG (International water)	Not regulated
ICAO (Air transport)	Not regulated

15. Regulatory Information

UNITED STATES:

Toxic Substances Control Act (TSCA)

TSCA Inventory Status:	All ingredients listed on TSCA inventory or exempt from listing.
Other TSCA Issues:	None

SARA Title III/CERCLA

Ingredients with "Reportable Quantities" (RQs) and/or "Threshold Planning Quantities" (TPQs).

Ingredient	SARA/CERCLA RQ (lb.)	SARA EHS TPQ (lb.)
None listed	---	---

Spills or releases resulting in the loss of any ingredient at or above its RQ require immediate notification to the National Response Center [(800) 424-8802] and to your Local Emergency Planning Committee.

SARA 311 Hazard Class:	Immediate
-------------------------------	-----------

SARA 313 Toxic Chemicals:

The following ingredients are SARA 313 "Toxic Chemicals" and may be subject to annual reporting requirements. CAS numbers and weight percents are found in Section 2.

Ingredient	Comment
None listed	----

State Right-To-Know

May be in addition to the ingredients found in Section 2, (Includes CA Proposition 65 listings)

Ingredient	Weight %	Comment
None listed	---	----

Additional Regulatory Information:	On chemical inventories or exempt in the following: Australia, Canada, China, EU, Japan, Korea, Mexico, New Zealand, Philippines, Taiwan, Turkey.
---	---

16. Other Information

- Keep out of the reach of children.

Issue Date:	June 28, 2017
Previous Issue Date:	February 29, 2016
Changes from previous version:	Added Alpha Terpineol 98% as a grade and expanded use to include industrial uses.

National Fire Protection Assoc. (NFPA) Classification:

4 = Severe; 3 = Serious; 2 = Moderate; 1 = Slight, 0 = Minimal
1 Health 2 Flammability 0 Reactivity

Hazardous Materials Information Systems (HMIS):

4 = Extreme; 3 = High; 2 = Moderate; 1 = Slight; 0 = Insignificant
1 Health 2 Flammability 0 Physical Hazard

The opinions expressed herein are those of qualified experts within R.E. Carroll, Inc. We believe that the information contained herein is current as of the date of this Safety Data Sheet. Since the use of this information and of these opinions and the conditions of use of this product are not within the control of R.E. Carroll, Inc., it is the user's obligation to determine the conditions of safe use of the products.