

DATE: 04/03/03 ACCT: 534455001 PAGE: 1  
INDEX: D30929481 CAT NO: T311 PO NBR: 250741 306218

\*\*\*\* MATERIAL SAFETY DATA SHEET \*\*\*\*

alpha-Terpineol  
00855

\*\*\*\* SECTION 1 - CHEMICAL PRODUCT AND COMPANY IDENTIFICATION \*\*\*\*

MSDS Name: alpha-Terpineol  
Catalog Numbers:  
AC420050030, S80217, T31 1, T31-1, T311  
Synonyms:

p-Menth-1-en-8-ol.  
Company Identification: Fisher Scientific  
1 Reagent Lane  
Fairlawn, NJ 07410

For information, call: 201-796-7100  
Emergency Number: 201-796-7100  
For CHEMTREC assistance, call: 800-424-9300  
For International CHEMTREC assistance, call: 703-527-3887

\*\*\*\* SECTION 2 - COMPOSITION, INFORMATION ON INGREDIENTS \*\*\*\*

CAS#	Chemical Name	%	EINECS#
98-55-5	alpha-Terpineol	100	202-680-6

Hazard Symbols: None Listed.  
Risk Phrases: None Listed.

\*\*\*\* SECTION 3 - HAZARDS IDENTIFICATION \*\*\*\*

EMERGENCY OVERVIEW

Appearance: white solid or liquid. Flash Point: 90 deg C.  
Caution! May cause central nervous system depression. May cause eye and skin irritation. May cause respiratory and digestive tract irritation. Material is a solid at room temperature that melts upon moderate heating into a combustible liquid with a flash point below 200°F (93.3°C).  
Target Organs: Central nervous system.

Potential Health Effects

Eye: May cause eye irritation. May cause chemical conjunctivitis and corneal damage.

Skin: May cause irritation and dermatitis. May cause cyanosis of the extremities.

Ingestion: May cause gastrointestinal irritation with nausea, vomiting and diarrhea. May cause headache, weakness, ataxia, delirium, fever, dehydration, and hypothermia.

Inhalation: May cause respiratory tract irritation. Inhalation at high concentrations may cause CNS depression and asphyxiation.

Chronic: No information found.

\*\*\*\* SECTION 4 - FIRST AID MEASURES \*\*\*\*

Eyes: Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids. Get medical aid.

Skin: Get medical aid. Flush skin with plenty of soap and water for at least 15 minutes while removing contaminated clothing and shoes. Wash clothing before reuse.

Ingestion: Do NOT induce vomiting. If victim is conscious and alert, give 2-4 cupfuls of milk or water. Never give anything by mouth to an unconscious person. Get medical aid.

Inhalation: Remove from exposure to fresh air immediately. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid. Do NOT use mouth-to-mouth resuscitation.

Notes to Physician: Treat symptomatically and supportively.

\*\*\*\* SECTION 5 - FIRE FIGHTING MEASURES \*\*\*\*

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Vapors may form an explosive mixture with air. Vapors can travel to a source of ignition and flash back. Use water spray to keep fire-exposed containers cool. Water may be ineffective. Material is lighter than water and a fire may be spread by the use of water. Containers may explode in the heat of a fire. Combustible Liquid. Vapors may be heavier than air. They can spread

3,068

DATE: 04/03/03 ACCT: 534455001 PAGE: 2  
INDEX: D30929481 CAT NO: T311 PO NBR: 250741 306218

along the ground and collect in low or confined areas.  
Extinguishing Media: In case of fire, use water, dry chemical, chemical foam, or alcohol-resistant foam. Use water spray to cool fire-exposed containers. Water may be ineffective.  
Autoignition Temperature: Not available.  
Flash Point: 90 deg C ( 194.00 deg F)  
Explosion Limits, lower: Not available.  
Explosion Limits, upper: Not available.  
NFPA Rating: (estimated) Health: 1; Flammability: 2; Instability: 0

\*\*\*\* SECTION 6 - ACCIDENTAL RELEASE MEASURES \*\*\*\*

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Absorb spill with inert material (e.g. vermiculite, sand or earth), then place in suitable container. Avoid runoff into storm sewers and ditches which lead to waterways. Clean up spills immediately, observing precautions in the Protective Equipment section. Remove all sources of ignition. Use a spark-proof tool. Provide ventilation.

\*\*\*\* SECTION 7 - HANDLING and STORAGE \*\*\*\*

Handling: Wash thoroughly after handling. Use only in a well-ventilated area. Ground and bond containers when transferring material. Avoid contact with eyes, skin, and clothing. Empty containers retain product residue, (liquid and/or vapor), and can be dangerous. Keep container tightly closed. Avoid contact with heat, sparks and flame. Avoid ingestion and inhalation. Do not pressurize, cut, weld, braze, solder, drill, grind, or expose empty containers to heat, sparks or open flames.

Storage: Keep away from heat, sparks, and flame. Keep away from sources of ignition. Store in a tightly closed container. Store in a cool, dry, well-ventilated area away from incompatible substances.

\*\*\*\* SECTION 8 - EXPOSURE CONTROLS, PERSONAL PROTECTION \*\*\*\*

Engineering Controls: Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Chemical Name	ACGIH	NIOSH	OSHA - Final PELs
alpha-Terpineol	none listed	none listed	none listed

OSHA Vacated PELs:  
alpha-Terpineol:  
No OSHA Vacated PELs are listed for this chemical.

Personal Protective Equipment

Eyes: Wear chemical goggles.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Always use a NIOSH or European Standard EN 149 approved respirator when necessary.

\*\*\*\* SECTION 9 - PHYSICAL AND CHEMICAL PROPERTIES \*\*\*\*

Physical State: Solid or liquid  
Color: white  
Odor: Turpentine odor.  
pH: Not available.  
Vapor Pressure: 1.0 mm Hg @52.8  
Vapor Density: >1.0  
Evaporation Rate: Not available.  
Viscosity: Not available.  
Boiling Point: 214 - 224 deg C @ 760mmHg  
Freezing/Melting Point: 31 deg C  
Decomposition Temperature:  
Solubility in water: slightly soluble in water  
Specific Gravity/Density: 0.830g/cm3  
Molecular Formula: C10H18O  
Molecular Weight: 154.25

3,069

DATE: 04/03/03 ACCT: 534455001 PAGE: 3  
INDEX: D30929481 CAT NO: T311 PO NBR: 250741 306218

\*\*\*\* SECTION 10 - STABILITY AND REACTIVITY \*\*\*\*

Chemical Stability:  
Stable under normal temperatures and pressures.  
Conditions to Avoid:  
Incompatible materials, ignition sources, excess heat.  
Incompatibilities with Other Materials:  
Strong oxidizing agents.  
Hazardous Decomposition Products:  
Carbon monoxide, irritating and toxic fumes and gases, carbon dioxide.  
Hazardous Polymerization: Has not been reported

\*\*\*\* SECTION 11 - TOXICOLOGICAL INFORMATION \*\*\*\*

RTECS#: CAS# 98-55-5: WZ6700000  
LD50/LC50: Not available.  
Carcinogenicity:  
alpha-Terpineol -  
Not listed by ACGIH, IARC, NIOSH, NTP, or OSHA.  
Epidemiology:  
No information found.  
Teratogenicity:  
No information found.  
Reproductive Effects:  
No information found.  
Neurotoxicity:  
No information found.  
Mutagenicity:  
No information found.  
Other Studies:  
See actual entry in RTECS for complete information.

\*\*\*\* SECTION 12 - ECOLOGICAL INFORMATION \*\*\*\*

Ecotoxicity:  
Fish toxicity: LC50 (96hr) rainbow trout 10-100 mg/l at 10°C static bioassay (GEMS: Graphical Exposure Modelling System 1982, US EPA, Washington, DC). Bioaccumulation: Estimated bioconcentration factor is 8.5-53 (Webb, M. et al Water Res. 1976, 10, 303).  
Other:  
For more information, see "HANDBOOK OF ENVIRONMENTAL FATE AND EXPOSURE DATA."

\*\*\*\* SECTION 13 - DISPOSAL CONSIDERATIONS \*\*\*\*

Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste.  
US EPA guidelines for the classification determination are listed in 40 CFR Parts 261.3. Additionally, waste generators must consult state and local hazardous waste regulations to ensure complete and accurate classification.  
RCRA P-Series: None listed.  
RCRA U-Series: None listed.

\*\*\*\* SECTION 14 - TRANSPORT INFORMATION \*\*\*\*

US DOT  
No information available  
Canadian TDG  
No information available.

\*\*\*\* SECTION 15 - REGULATORY INFORMATION \*\*\*\*

US FEDERAL  
TSCA  
CAS# 98-55-5 is listed on the TSCA inventory.  
Health & Safety Reporting List  
None of the chemicals are on the Health & Safety Reporting List.  
Chemical Test Rules  
None of the chemicals in this product are under a Chemical Test Rule.  
Section 12b  
None of the chemicals are listed under TSCA Section 12b.  
TSCA Significant New Use Rule  
None of the chemicals in this material have a SNUR under TSCA.  
SARA  
CERCLA Hazardous Substances and corresponding RQs  
None of the chemicals in this material have an RQ.  
SARA Section 302 Extremely Hazardous Substances  
None of the chemicals in this product have a TPQ.  
SARA Codes  
CAS # 98-55-5: acute, flammable.  
Section 313  
No chemicals are reportable under Section 313.  
Clean Air Act:  
This material does not contain any hazardous air pollutants.

3,070

DATE: 04/03/03 ACCT: 534455001 PAGE: 4  
INDEX: D30929481 CAT NO: T311 PO NBR: 250741 306218

This material does not contain any Class 1 Ozone depletors.  
This material does not contain any Class 2 Ozone depletors.  
Clean Water Act:  
None of the chemicals in this product are listed as Hazardous Substances under the CWA.  
None of the chemicals in this product are listed as Priority Pollutants under the CWA.  
None of the chemicals in this product are listed as Toxic Pollutants under the CWA.  
OSHA:  
None of the chemicals in this product are considered highly hazardous by OSHA.  
STATE  
FL or NJ:  
alpha-Terpineol is not present on state lists from CA, PA, MN, MA, California No Significant Risk Level:  
None of the chemicals in this product are listed.  
European/International Regulations  
European Labeling in Accordance with EC Directives  
Hazard Symbols: Not available.  
Risk Phrases:  
Safety Phrases:  
S 24/25 Avoid contact with skin and eyes.  
WGK (Water Danger/Protection)  
CAS# 98-55-5: No information available.  
United Kingdom Occupational Exposure Limits  
United Kingdom Maximum Exposure Limits  
Canada  
CAS# 98-55-5 is listed on Canada's DSL List.  
This product has a WHMIS classification of B3, D2B.  
CAS# 98-55-5 is not listed on Canada's Ingredient Disclosure List.  
Exposure Limits

\*\*\*\* SECTION 16 - ADDITIONAL INFORMATION \*\*\*\*

MSDS Creation Date: 9/30/1997 Revision #5 Date: 2/22/2001

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no way shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential or exemplary damages, howsoever arising, even if the company has been advised of the possibility of such damages.