

OIL, MISC: PINE

OPI

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Arizole Oleum abietis UN 1272 (DOT) Unipine Yarmor Yarmor pine oil	Liquid Colorless to pale yellow Turpentine like odor
	Floats on water.
<p>Keep people away. Call fire department. Avoid contact with liquid and vapor. Notify local health and pollution control agencies. Protect water intakes.</p>	
Fire	<p>Combustible. Water may be ineffective on fire. Wear self contained breathing apparatus and protective clothing. Extinguish with dry chemical, alcohol foam, or CO₂. Cool exposed containers with water.</p>
Exposure	<p>CALL FOR MEDICAL AID.</p> <p>VAPOR Irritating to eyes, nose and throat. If inhaled, will cause nausea, vomiting, headache, difficult breathing or loss of consciousness. Move to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>LIQUID POISONOUS IF SWALLOWED. Irritating to skin and eyes. Remove contaminated clothing and shoes. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. IF SWALLOWED, do not induce vomiting.</p>
Water Pollution	<p>Dangerous to aquatic life in high concentrations. Fouling to shoreline. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p>

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Dilute and disperse
Contain
Collection Systems: Skim
Chemical and Physical Treatment:
Absorb
Clean shore line
Salvage waterfowl

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** 30; Miscellaneous Hydrocarbon Mixture
2.2 **Formula:** Mixture, primarily C₁₀H₁₆OH
2.3 **IMO/UN Designation:** 3.3/1272
2.4 **DOT ID No.:** 1272
2.5 **CAS Registry No.:** 8002-09-3
2.6 **NAERG Guide No.:** 129
2.7 **Standard Industrial Trade Classification:** 59812

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Organic canister or air-supplied mask; goggles or face shield; rubber gloves.
- 3.2 **Symptoms Following Exposure:** Vapors can cause headache, confusion, respiratory distress. Liquid irritates skin. If ingested, can irritate the entire digestive system and may injure kidneys. If liquid is taken into lungs, causes severe pneumonitis, pulmonary edema/hemorrhage.
- 3.3 **Treatment of Exposure:** INHALATION: remove victim to fresh air, call a doctor, administer artificial respiration and oxygen if required. INGESTION: Do not induce vomiting. If vomiting occurs spontaneously, keep victim's head below his hips to prevent his breathing vomitus into his lungs; call a doctor. EYES: Flush with water for at least 15 min. SKIN: Wipe off, wash with soap and water.
- 3.4 **TLV-TWA:** Not listed.
3.5 **TLV-STEL:** Not listed.
3.6 **TLV-Ceiling:** Not listed.
3.7 **Toxicity by Ingestion:** Grade 2; LD₅₀ = 3.2 g/kg (rat); TD₀₁ = 4.78g/kg (human)
3.8 **Toxicity by Inhalation:** Currently not available.
3.9 **Chronic Toxicity:** None
3.10 **Vapor (Gas) Irritant Characteristics:** Vapors cause a slight smarting of the eyes or respiratory system if present in high concentrations. The effect is temporary.
3.11 **Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.
3.12 **Odor Threshold:** Currently not available
3.13 **IDLH Value:** Not listed.
3.14 **OSHA PEL-TWA:** Not listed.
3.15 **OSHA PEL-STEL:** Not listed.
3.16 **OSHA PEL-Ceiling:** Not listed.
3.17 **EPA AEGL:** Not listed

4. FIRE HAZARDS

- 4.1 **Flash Point:** 180°F C.C.
4.2 **Flammable Limits in Air:** Currently not available
4.3 **Fire Extinguishing Agents:** Water spray, dry chemical, alcohol foam or carbon dioxide.
4.4 **Fire Extinguishing Agents Not to Be Used:** Water may be ineffective.
4.5 **Special Hazards of Combustion Products:** Currently not available
4.6 **Behavior in Fire:** Forms heavy black smoke and soot.
4.7 **Auto Ignition Temperature:** Currently not available
4.8 **Electrical Hazards:** Currently not available
4.9 **Burning Rate:** Currently not available
4.10 **Adiabatic Flame Temperature:** Currently not available
4.11 **Stoichiometric Air to Fuel Ratio:** Not pertinent.
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** Not pertinent.
4.14 **Minimum Oxygen Concentration for Combustion (MOCC):** Not listed

5. CHEMICAL REACTIVITY

- 5.1 **Reactivity with Water:** No reaction
5.2 **Reactivity with Common Materials:** No reaction
5.3 **Stability During Transport:** Stable
5.4 **Neutralizing Agents for Acids and Caustics:** Data not pertinent
5.5 **Polymerization:** Data not pertinent
5.6 **Inhibitor of Polymerization:** Data not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available
6.2 **Waterfowl Toxicity:** Currently not available
6.3 **Biological Oxygen Demand (BOD):** Currently not available
6.4 **Food Chain Concentration Potential:** Currently not available
6.5 **GESAMP Hazard Profile:**
Bioaccumulation: 0
Damage to living resources: 2
Human Oral hazard: 1
Human Contact hazard: 1
Reduction of amenities: X

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Currently not available
7.2 **Storage Temperature:** Ambient
7.3 **Inert Atmosphere:** Currently not available
7.4 **Venting:** Currently not available
7.5 **IMO Pollution Category:** B
7.6 **Ship Type:** 3
7.7 **Barge Hull Type:** Currently not available

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Flammable Liquid
8.2 **49 CFR Class:** 3
8.3 **49 CFR Package Group:** III
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:**
- | Category | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 0 |
| Flammability (Red)..... | 2 |
| Instability (Yellow)..... | 0 |
- 8.6 **EPA Reportable Quantity:** Not listed.
8.7 **EPA Pollution Category:** Not listed.
8.8 **RCRA Waste Number:** Not listed
8.9 **EPA FWPCA List:** Not listed

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
9.2 **Molecular Weight:** alpha terpenol primary component 154.25
9.3 **Boiling Point at 1 atm:** >400°F = 204.6°C = 477.75°K
9.4 **Freezing Point:** <50°F = <10°C = <283.2°K
9.5 **Critical Temperature:** Currently not available
9.6 **Critical Pressure:** Currently not available
9.7 **Specific Gravity:** 0.95
9.8 **Liquid Surface Tension:** Currently not available
9.9 **Liquid Water Interfacial Tension:** Currently not available
9.10 **Vapor (Gas) Specific Gravity:** 5.3
9.11 **Ratio of Specific Heats of Vapor (Gas):** Currently not available
9.12 **Latent Heat of Vaporization:** Currently not available
9.13 **Heat of Combustion:** Currently not available
9.14 **Heat of Decomposition:** Currently not available
9.15 **Heat of Solution:** Currently not available
9.16 **Heat of Polymerization:** Currently not available
9.17 **Heat of Fusion:** Currently not available
9.18 **Limiting Value:** Currently not available
9.19 **Reid Vapor Pressure:** Currently not available

NOTES

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9.20 SATURATED LIQUID DENSITY		9.21 LIQUID HEAT CAPACITY		9.22 LIQUID THERMAL CONDUCTIVITY		9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F	Temperature (degrees F)	British thermal unit inch per hour-square foot-F	Temperature (degrees F)	Centipoise
	C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E

9.24 SOLUBILITY IN WATER		9.25 SATURATED VAPOR PRESSURE		9.26 SATURATED VAPOR DENSITY		9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	Pounds per 100 pounds of water	Temperature (degrees F)	Pounds per square inch	Temperature (degrees F)	Pounds per cubic foot	Temperature (degrees F)	British thermal unit per pound-F
	S L I G H T L Y S O L U B L E	68	0.019		C U R R E N T L Y N O T A V A I L A B L E		C U R R E N T L Y N O T A V A I L A B L E