

Common Name: **alpha-PINENE**

Synonyms: 2-Pinene; Cyclic Dexadiene

CAS No: 80-56-8

Molecular Formula: C₁₀H₁₆

RTK Substance No: 0052

Description: Oily, colorless liquid

HAZARD DATA

Hazard Rating	Firefighting	Reactivity
1- Health 3- Fire 0- Reactivity DOT#: UN 2368 ERG Guide #: 128 Hazard Class: 3 (Flammable)	alpha-Pinene is a FLAMMABLE LIQUID. Use dry chemical, CO ₂ , alcohol-resistant foam or other foam extinguishing agents, as water may not be effective in fighting fires. POISONOUS GASES ARE PRODUCED IN FIRE. CONTAINERS MAY EXPLODE IN FIRE. Use water spray to keep fire-exposed containers cool. Vapor is heavier than air and may travel a distance to cause a fire or explosion far from the source or flash back.	alpha-Pinene reacts violently with OXIDIZING AGENTS (such as PERCHLORATES, PEROXIDES, PERMANGANATES, CHLORATES, NITRATES, CHLORINE, BROMINE and FLUORINE); PERCHROMATES; STRONG ACIDS (such as HYDROCHLORIC, SULFURIC and NITRIC); and OXIDIZING ACIDS (such as PEROXYACETIC ACID and PEROXYBENZOIC ACID).

SPILL/LEAKS

Isolation Distance:

Small Spill: 60 meters (200 feet)

Large Spill: 270 meters (900 feet)

Fire: 800 meters (1/2 mile)

Absorb liquids in vermiculite, dry sand, earth, or a similar material and deposit in sealed containers.

Keep **alpha-Pinene** out of confined spaces, such as sewers, because of the possibility of an explosion.

DO NOT wash into sewer.

Harmful to aquatic life.

PHYSICAL PROPERTIES

Odor Threshold:	<i>Turpentine</i> -like
Flash Point:	91°F (33°C)
Auto Ignition Temp:	491°F (255°C)
Vapor Density:	4.7 (air = 1)
Vapor Pressure:	4.9 mm Hg at 81°F (27°C)
Specific Gravity:	0.9 (water = 1)
Water Solubility:	Insoluble
Boiling Point:	313°F (156°C)
Melting Point:	-67°F (-55°C)
Freezing Point:	-81°F (-63°C)
Ionization Potential:	8.07 +/- 0.5 (eV)
Molecular Weight:	136.3

EXPOSURE LIMITS

OSHA:	100 ppm, 8-hr TWA (as <i>Turpentine</i>)
NIOSH:	100 ppm, 10-hr TWA (as <i>Turpentine</i>)
ACGIH:	20 ppm, 8-hr TWA
IDLH:	800 ppm (as <i>Turpentine</i>)
PAC LEVELS:	PAC-1 = 60 ppm; PAC-2 = 120 ppm; PAC-3 = 1,500 ppm

PROTECTIVE EQUIPMENT

Gloves:	Silver Shield®/4H® and Viton (>8-hr breakthrough for <i>Turpentine</i>)
Coveralls:	DuPont Tychem® Responder®; Kappler® Zytron® 500; and Saint-Gobain ONESuit® PRO (>8-hr breakthrough for <i>Turpentine</i>)
Respirator:	>20 ppm – Full facepiece APR with Organic vapor filter >200 ppm – Pressure demand supplied air >800 ppm – Pressure demand SCBA

HEALTH EFFECTS

Eyes:	Irritation
Skin:	Irritation
Inhalation:	Nose, throat and lung irritation with coughing and wheezing Headache, dizziness, confusion, nausea and vomiting

FIRST AID AND DECONTAMINATION

Remove the person from exposure.
Flush eyes with large amounts of water for at least 15 minutes. Remove contact lenses if worn.
Quickly remove contaminated clothing. Immediately wash contaminated skin with large amounts of soap and water.
Begin artificial respiration if breathing has stopped and CPR if necessary.
Transfer promptly to a medical facility.