TURPENTINE

TPT

CAUTIONARY RESPONSE INFORMATION

Common Synonyms
D.D. turpentine
Gum turpentine
Spirit of turpentine
Sulfate turpentine
Turps
Wood turpentine

Watery liquid | Colorless | Penetrating, unpleasant odor

Floats on water. Irritating vapor is produced.

Keep people away.
Shut off ignition sources and call fire department.
Avoid contact with liquid and vapor.
Notify local health and pollution control agencies.

Fire

FLAMMABLE.
Flashback along vapor trail may occur.
Vapor may explode if ignited in an enclosed area.
Extinguish with dry chemical, foam, or carbon dioxide.
Water may be ineffective on fire.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

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.

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 and victim is CONSCIOUS, have victim drink water or milk.

Water Pollution

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.

1. CORRECTIVE RESPONSE ACTIONS

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

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 30; Olefin
2.2 Formula: $C_{10}H_{16}$
2.3 IMO/UN Designation: 3.3/1299
2.4 DOT ID No.: 1299
2.5 CAS Registry No.: 8006-64-2
2.6 NAERG Guide No.: 129
2.7 Standard Industrial Trade Classification: 51119

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 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.
3.3 Treatment of Exposure: INHALATION: remove victim to fresh air; call a doctor; administer artificial respiration and oxygen if required. INGESTION: give water and induce vomiting; call a doctor. EYES: flush with water for at least 15 min. SKIN: wipe off, wash with soap and water.
3.4 TLV-TWA: 100 ppm
3.5 TLV-STEL: Not listed.
3.6 TLV-Ceiling: Not listed.
3.7 Toxicity by Ingestion: Grade 2; LD_{50} = 0.5 to 5 g/kg
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: 800 ppm
3.14 OSHA PEL-TWA: 100 ppm
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: 95°F C.C.
4.2 Flammable Limits in Air: 0.8% (LEL)
4.3 Fire Extinguishing Agents: Foam, dry chemical, or carbon dioxide
4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.
4.5 Special Hazards of Combustion Products: Not pertinent
4.6 Behavior in Fire: Forms heavy black smoke and soot
4.7 Auto Ignition Temperature: 488°F
4.8 Electrical Hazards: Not pertinent
4.9 Burning Rate: 2.4 mm/min.
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 66.6 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 18.0 (calc.)
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: Not pertinent
5.5 Polymerization: Not pertinent
5.6 Inhibitor of Polymerization: Not pertinent

6. WATER POLLUTION

6.1 Aquatic Toxicity:
100 ppm/*/fish/toxic/fresh water
*Time period not specified.
6.2 Waterfowl Toxicity: Currently not available
6.3 Biological Oxygen Demand (BOD): Currently not available
6.4 Food Chain Concentration Potential: None
6.5 GESAMP Hazard Profile:
Bioaccumulation: T
Damage to living resources: 2
Human Oral hazard: 1
Human Contact hazard: II
Reduction of amenities: XX

7. SHIPPING INFORMATION

7.1 Grades of Purity: A wide variety of grades and purities are shipped. All have about the same hazardous properties.
7.2 Storage Temperature: Ambient
7.3 Inert Atmosphere: No requirement
7.4 Venting: Open (flame arrester)
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: Yes
8.5 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue).....	2
Flammability (Red).....	3
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: Not pertinent
9.3 Boiling Point at 1 atm: 302–320°F = 150–160°C = 423–433°K
9.4 Freezing Point: Not pertinent
9.5 Critical Temperature: Not pertinent
9.6 Critical Pressure: Not pertinent
9.7 Specific Gravity: 0.86 at 15°C (liquid)
9.8 Liquid Surface Tension: Currently not available
9.9 Liquid Water Interfacial Tension: 14 dynes/cm = 0.014 N/m at 22.7°C
9.10 Vapor (Gas) Specific Gravity: Not pertinent
9.11 Ratio of Specific Heats of Vapor (Gas): Not pertinent
9.12 Latent Heat of Vaporization: Not pertinent
9.13 Heat of Combustion: Not pertinent
9.14 Heat of Decomposition: Not pertinent
9.15 Heat of Solution: Not pertinent
9.16 Heat of Polymerization: Not pertinent
9.17 Heat of Fusion: Currently not available
9.18 Limiting Value: Currently not available
9.19 Reid Vapor Pressure: 0.26 psia

NOTES

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9.20 SATURATED LIQUID DENSITY	
Temperature (degrees F)	Pounds per cubic foot
32	53.680
34	53.680
36	53.680
38	53.680
40	53.680
42	53.680
44	53.680
46	53.680
48	53.680
50	53.680
52	53.680
54	53.680
56	53.680
58	53.680
60	53.680
62	53.680
64	53.680
66	53.680

9.21 LIQUID HEAT CAPACITY	
Temperature (degrees F)	British thermal unit per pound-F
28	0.411
30	0.411
32	0.411
34	0.411
36	0.411
38	0.411
40	0.411
42	0.411
44	0.411
46	0.411
48	0.411
50	0.411
52	0.411
54	0.411
56	0.411
58	0.411
60	0.411
62	0.411
64	0.411
66	0.411

9.22 LIQUID THERMAL CONDUCTIVITY	
Temperature (degrees F)	British thermal unit inch per hour-square foot-F
32	1.040
34	1.040
36	1.040
38	1.040
40	1.040
42	1.040
44	1.040
46	1.040
48	1.040
50	1.040
52	1.040
54	1.040
56	1.040
58	1.040
60	1.040
62	1.040
64	1.040
66	1.040

9.23 LIQUID VISCOSITY	
Temperature (degrees F)	Centipoise
46	1.838
48	1.802
50	1.767
52	1.733
54	1.700
56	1.668
58	1.636
60	1.606
62	1.576
64	1.547
66	1.519
68	1.491
70	1.464
72	1.438
74	1.413
76	1.388
78	1.364
80	1.340
82	1.317
84	1.294
86	1.272
88	1.251
90	1.230
92	1.210
94	1.190
96	1.170

9.24 SOLUBILITY IN WATER	
Temperature (degrees F)	Pounds per 100 pounds of water
	INSOLUBLE

9.25 SATURATED VAPOR PRESSURE	
Temperature (degrees F)	Pounds per square inch
55	0.525
60	0.561
65	0.597
70	0.636
75	0.676
80	0.718
85	0.761
90	0.807
95	0.854
100	0.903
105	0.954
110	1.007
115	1.061
120	1.118
125	1.177
130	1.237

9.26 SATURATED VAPOR DENSITY	
Temperature (degrees F)	Pounds per cubic foot
	NOT PERTINENT

9.27 IDEAL GAS HEAT CAPACITY	
Temperature (degrees F)	British thermal unit per pound-F
	NOT PERTINENT