

DICHLOROPROPENE, DICHLOROPROPANE MIXTURE

DMX

CAUTIONARY RESPONSE INFORMATION

<p>Common Synonyms</p> <p>D-D soil fumigant 1,3-Dichloropropene and 1,2-Dichloropropane Dowfume N Telone Vidden D</p>	<p>Liquid</p> <p>Straw to amber</p> <p>Pungent, garlic-like</p> <p>Sinks and slowly mixes with water.</p>
<p>KEEP PEOPLE AWAY. AVOID CONTACT WITH LIQUID AND VAPOR. Avoid inhalation. Wear self-contained positive pressure breathing apparatus and chemical protective suit. Shut off ignition sources. Call fire department. Evacuate area. Stay upwind and use water spray to "knock down" vapor. Notify local health and pollution control agencies. Protect water intakes.</p>	
<p>Fire</p>	<p>FLAMMABLE. POISONOUS GASES ARE PRODUCED IN FIRE. Containers may explode in fire. Vapor may explode indoors, outdoors or in sewers. Flashback along vapor trail may occur. Extinguish small fires: dry chemical, CO₂, water spray or foam; large fires: water spray, fog or foam. Cool exposed containers with water. Combat fires from safe distances or protected location.</p>
<p>Exposure</p>	<p>CALL FOR MEDICAL AID.</p> <p>VAPOR Irritating to eyes, respiratory tract, skin and digestive tract. Inhalation will cause gasping, refusal to breathe, and respiratory distress; may be fatal. Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen.</p> <p>LIQUID May be fatal if swallowed or absorbed through skin. Will burn exposed tissues. IF IN EYES, hold eyelids open and flush with water for 15 minutes. IF ON SKIN, flush with water for 15 minutes; wash with soap and water. Remove and isolate contaminated clothing and shoes at the site. IF SWALLOWED and victim is CONSCIOUS, have victim drink water and induce vomiting. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.</p>
<p>Water Pollution</p>	<p>Dangerous to aquatic life in high concentrations. 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
Collection Systems: Pump; Dredge
Do not burn

2. CHEMICAL DESIGNATIONS

2.1 **CG Compatibility Group:** 15; Substituted allyls
2.2 **Formula:** C₃H₂Cl₂ & C₃H₃Cl₂
2.3 **IMO/UN Designation:** 3.3/2047
2.4 **DOT ID No.:** 2047
2.5 **CAS Registry No.:** 8003-19-8
2.6 **NAERG Guide No.:** 132
2.7 **Standard Industrial Trade Classification:** 51138

3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Wear self contained (positive pressure if available) breathing apparatus and full protective clothing. This material will penetrate ordinary rubber protective equipment such as boots and gloves; therefore chemical resistant equipment must be worn.
- 3.2 **Symptoms Following Exposure:** Toxic; may be fatal if inhaled, swallowed or absorbed through the skin. Inhalation causes gasping, refusal to breathe and respiratory distress. Contact may cause burns to skin and eyes. Ingestion may cause acute gastrointestinal distress with congestion and edema of the lungs.
- 3.3 **Treatment of Exposure:** INHALATION: Move victim to fresh air. If breathing has stopped, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention. EYES: Immediately flush eyes with running water for at least 15 min.; hold eyelids open if necessary. Continue to flush eyes with water during transport to treatment facilities. SKIN: Immediately deluge exposed area with water for at least 15 min.; Remove and isolate contaminated clothing and shoes at the site. Wash contaminated area with soap and water. INGESTION: If victim is conscious, give no more than 2 glasses of water. Induce vomiting either by giving 30 cc (2 tablespoons) Syrup of Ipecac or by touching the back of the throat. If victim is unconscious or having convulsions, do nothing but keep victim quiet and maintain normal body temperature.
- 3.4 **TLV-TWA:** Not listed.
3.5 **TLV-STEL:** Not listed.
3.6 **TLV-Ceiling:** Not listed.
3.7 **Toxicity by Ingestion:** Grade 3; LD₅₀ = 140 mg/kg (rat)
3.8 **Toxicity by Inhalation:** Currently not available.
3.9 **Chronic Toxicity:** Has mutagenic effects. May cause liver and kidney damage.
3.10 **Vapor (Gas) Irritant Characteristics:** Causes intense irritation of eyes, skin and respiratory mucosa.
3.11 **Liquid or Solid Characteristics:** Contact with liquid will cause burns to exposed surfaces.
3.12 **Odor Threshold:** 1,3-dichloropropene (a major component): 1-3ppm (most people) 1,2-dichloropropane (a major component): 0.1 ppm
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:** 67°F C.C.
4.2 **Flammable Limits in Air:** 5.3% - 14.5%
4.3 **Fire Extinguishing Agents:** Small fires: dry chemicals, CO₂, water spray or foam; large fires: water spray, fog or foam.
4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
4.5 **Special Hazards of Combustion**
Products: Smoke contains hydrogen chloride and it may contain phosgene; both components are highly toxic gases.
4.6 **Behavior in Fire:** Can react with aluminum, magnesium and their alloys. Can generate highly irritating and explosive vapors.
4.7 **Auto Ignition Temperature:** Currently not available
4.8 **Electrical Hazards:** Class 1, group C
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:** Can react with aluminum, magnesium, and their alloys.
5.3 **Stability During Transport:** Stable
5.4 **Neutralizing Agents for Acids and Caustics:** Sodium bicarbonate or sand and soda ash mixture.
5.5 **Polymerization:** Not pertinent
5.6 **Inhibitor of Polymerization:** Not pertinent

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
320 ppm/96 hr/bluegill or sunfish/LC₅₀/fresh water
240 ppm/96 hr/tidewater silverside/LC₅₀/salt water
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: 3
Human Oral hazard: 2
Human Contact hazard: II
Reduction of amenities: XX

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Mixture
7.2 **Storage Temperature:** Ambient
7.3 **Inert Atmosphere:** No requirements
7.4 **Venting:** Pressure-vacuum valve
7.5 **IMO Pollution Category:** B
7.6 **Ship Type:** 2
7.7 **Barge Hull Type:** 2

8. HAZARD CLASSIFICATIONS

- 8.1 **49 CFR Category:** Flammable liquid.
8.2 **49 CFR Class:** 3
8.3 **49 CFR Package Group:** II
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:**
- | Category | Classification |
|----------------------|----------------|
| Health Hazard (Blue) | 3 |
| 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:** Yes

9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid
9.2 **Molecular Weight:** Not pertinent (mixture)
9.3 **Boiling Point at 1 atm:** 217-340°F = 102.8-171.1°C = 376-444.3°K
9.4 **Freezing Point:** Currently not available
9.5 **Critical Temperature:** Currently not available
9.6 **Critical Pressure:** Currently not available
9.7 **Specific Gravity:** 1.2 (temperature unknown)
9.8 **Liquid Surface Tension:** Currently not available
9.9 **Liquid Water Interfacial Tension:** Currently not available
9.10 **Vapor (Gas) Specific Gravity:** 4
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:** 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:** 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
	C U R R E N T L Y N O T A V A I L A B L E	70	0.680		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