

# DDT

DDT

| CAUTIONARY RESPONSE INFORMATION  |   |   |          | 4. FIRE HAZARDS   | 7. SHIPPING INFORMATION   |
|--|---|---|----------|---|---|
| Common Synonyms<br>p,p-DDT<br>Dichlorodiphenyltrichloroethane<br>1,1,1-Trichloro-2,2-bis(p-chlorophenyl) ethane  | Solid<br><br>Sinks in water.  | Colorless<br><br>   | Odorless | <p><b>4.1 Flash Point:</b> 162°F-171°F C.C.</p> <p><b>4.2 Flammable Limits in Air:</b> Not pertinent</p> <p><b>4.3 Fire Extinguishing Agents:</b> Water, foam, dry chemical, or carbon dioxide</p> <p><b>4.4 Fire Extinguishing Agents Not to Be Used:</b> Not pertinent</p> <p><b>4.5 Special Hazards of Combustion Products:</b> Toxic and irritating gases may be generated</p> <p><b>4.6 Behavior in Fire:</b> Melts and burns</p> <p><b>4.7 Auto Ignition Temperature:</b> Currently not available</p> <p><b>4.8 Electrical Hazards:</b> Not pertinent</p> <p><b>4.9 Burning Rate:</b> Currently not available</p> <p><b>4.10 Adiabatic Flame Temperature:</b> Currently not available</p> <p><b>4.11 Stoichiometric Air to Fuel Ratio:</b> 71.4 (calc.)</p> <p><b>4.12 Flame Temperature:</b> Currently not available</p> <p><b>4.13 Combustion Molar Ratio (Reactant to Product):</b> 21.0 (calc.)</p> <p><b>4.14 Minimum Oxygen Concentration for Combustion (MOCC):</b> Not listed</p> | <p><b>7.1 Grades of Purity:</b> Technical</p> <p><b>7.2 Storage Temperature:</b> Currently not available</p> <p><b>7.3 Inert Atmosphere:</b> Currently not available</p> <p><b>7.4 Venting:</b> Currently not available</p> <p><b>7.5 IMO Pollution Category:</b> Currently not available</p> <p><b>7.6 Ship Type:</b> Currently not available</p> <p><b>7.7 Barge Hull Type:</b> Currently not available</p> |
| <b>Fire</b>  | Combustible.<br>POISONOUS GASES ARE PRODUCED IN FIRE.<br>Wear goggles and self-contained breathing apparatus.<br>Extinguish with water, dry chemical, foam, or carbon dioxide.  |   |          |   |   |
| <b>Exposure</b>  | CALL FOR MEDICAL AID.<br><br>SOLIDS<br>Irritating to skin and eyes.<br>If swallowed, will cause nausea, vomiting, headache, or loss of consciousness.<br>Remove contaminated clothing and shoes.<br>Flush affected areas with plenty of water.<br>IF IN EYES, hold eyelids open and flush with plenty of water.<br>IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. |   |          |   |   |
| <b>Water Pollution</b>   | HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.<br>May be dangerous if it enters water intakes.<br>Notify local health and wildlife officials.<br>Notify operators of nearby water intakes.   |   |          |   |   |
| <b>1. CORRECTIVE RESPONSE ACTIONS</b><br>Stop discharge<br>Contain<br>Collection Systems: Skim; Dredge<br>Chemical and Physical Treatment:<br>Absorb<br>Clean shore line   |   | <b>2. CHEMICAL DESIGNATIONS</b><br>2.1 CG Compatibility Group: Not listed.<br>2.2 Formula: (p-ClC <sub>6</sub> H <sub>4</sub> ) <sub>2</sub> CHCCl <sub>3</sub><br>2.3 IMO/UN Designation: 9/2761<br>2.4 DOT ID No.: 2761<br>2.5 CAS Registry No.: 50-29-3<br>2.6 NAERG Guide No.: 151<br>2.7 Standard Industrial Trade Classification: 59110 |          |   |   |
| <b>3. HEALTH HAZARDS</b>   |   |   |          |   |   |
| <p><b>3.1 Personal Protective Equipment:</b> Currently not available</p> <p><b>3.2 Symptoms Following Exposure:</b> Very large doses are followed promptly by vomiting, due to local gastric irritation; delayed emesis or diarrhea may occur. With smaller doses, symptoms usually appear 2-3 hours after ingestion. These include tingling of lips, tongue, and face; malaise, headache, sore throat, fatigue, coarse tremors of neck, head, and eyelids; apprehension, ataxia, and confusion. Convulsions may alternate with periods of coma and partial paralysis. Vital signs are essentially normal, but in severe poisoning the pulse may be irregular and abnormally slow; ventricular fibrillation and sudden death may occur at any time during acute phase. Pulmonary edema usually indicates profound intoxication.</p> <p><b>3.3 Treatment of Exposure: INGESTION:</b> treatment should be done by a physician. It usually includes gastric lavage and administration of saline cathartic, phenobarbital, and parenteral fluids. Patient should be kept quiet and under observation for at least 24 hours.</p> <p><b>3.4 TLV-TWA:</b> 1 mg/m<sup>3</sup></p> <p><b>3.5 TLV-STEL:</b> Not listed.</p> <p><b>3.6 TLV-Ceiling:</b> Not listed.</p> <p><b>3.7 Toxicity by Ingestion:</b> Grade 3; LD<sub>50</sub> = 50 to 500 mg/kg (rat)</p> <p><b>3.8 Toxicity by Inhalation:</b> Currently not available.</p> <p><b>3.9 Chronic Toxicity:</b> Currently not available</p> <p><b>3.10 Vapor (Gas) Irritancy Characteristics:</b> Not pertinent</p> <p><b>3.11 Liquid or Solid Characteristics:</b> Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.</p> <p><b>3.12 Odor Threshold:</b> Odorless</p> <p><b>3.13 IDLH Value:</b> 500 mg/m<sup>3</sup></p> <p><b>3.14 OSHA PEL-TWA:</b> 1 mg/m<sup>3</sup></p> <p><b>3.15 OSHA PEL-STEL:</b> Not listed.</p> <p><b>3.16 OSHA PEL-Ceiling:</b> Not listed.</p> <p><b>3.17 EPA AEGL:</b> Not listed</p> |   |   |          |   |   |
| <b>4. FIRE HAZARDS</b>   |   |   |          |   |   |
| <p><b>4.1 Flash Point:</b> 162°F-171°F C.C.</p> <p><b>4.2 Flammable Limits in Air:</b> Not pertinent</p> <p><b>4.3 Fire Extinguishing Agents:</b> Water, foam, dry chemical, or carbon dioxide</p> <p><b>4.4 Fire Extinguishing Agents Not to Be Used:</b> Not pertinent</p> <p><b>4.5 Special Hazards of Combustion Products:</b> Toxic and irritating gases may be generated</p> <p><b>4.6 Behavior in Fire:</b> Melts and burns</p> <p><b>4.7 Auto Ignition Temperature:</b> Currently not available</p> <p><b>4.8 Electrical Hazards:</b> Not pertinent</p> <p><b>4.9 Burning Rate:</b> Currently not available</p> <p><b>4.10 Adiabatic Flame Temperature:</b> Currently not available</p> <p><b>4.11 Stoichiometric Air to Fuel Ratio:</b> 71.4 (calc.)</p> <p><b>4.12 Flame Temperature:</b> Currently not available</p> <p><b>4.13 Combustion Molar Ratio (Reactant to Product):</b> 21.0 (calc.)</p> <p><b>4.14 Minimum Oxygen Concentration for Combustion (MOCC):</b> Not listed</p>  |   |   |          |   |   |
| <b>5. CHEMICAL REACTIVITY</b>  |   |   |          |   |   |
| <p><b>5.1 Reactivity with Water:</b> No reaction</p> <p><b>5.2 Reactivity with Common Materials:</b> No reaction</p> <p><b>5.3 Stability During Transport:</b> Stable</p> <p><b>5.4 Neutralizing Agents for Acids and Caustics:</b> Not pertinent</p> <p><b>5.5 Polymerization:</b> Not pertinent</p> <p><b>5.6 Inhibitor of Polymerization:</b> Not pertinent</p>   |   |   |          |   |   |
| <b>6. WATER POLLUTION</b>  |   |   |          |   |   |
| <p><b>6.1 Aquatic Toxicity:</b><br/>0.0039 ppm/24 hr/bass/TL<sub>50</sub>/fresh water<br/>0.0018 ppm/96 hr/bass/TL<sub>50</sub>/fresh water<br/>0.0028 ppm/48 hr/killifish/50% kill/salt water</p> <p><b>6.2 Waterfowl Toxicity:</b> 2240 mg/kg</p> <p><b>6.3 Biological Oxygen Demand (BOD):</b> Not pertinent</p> <p><b>6.4 Food Chain Concentration Potential:</b> High</p> <p><b>6.5 GESAMP Hazard Profile:</b><br/>Bioaccumulation: +<br/>Damage to living resources: 4<br/>Human Oral hazard: 2<br/>Human Contact hazard: II<br/>Reduction of amenities: XXX</p>   |   |   |          |   |   |
| <b>7. SHIPPING INFORMATION</b>   |   |   |          |   |   |
| <p><b>7.1 Grades of Purity:</b> Technical</p> <p><b>7.2 Storage Temperature:</b> Currently not available</p> <p><b>7.3 Inert Atmosphere:</b> Currently not available</p> <p><b>7.4 Venting:</b> Currently not available</p> <p><b>7.5 IMO Pollution Category:</b> Currently not available</p> <p><b>7.6 Ship Type:</b> Currently not available</p> <p><b>7.7 Barge Hull Type:</b> Currently not available</p>  |   |   |          |   |   |
| <b>8. HAZARD CLASSIFICATIONS</b>   |   |   |          |   |   |
| <p><b>8.1 49 CFR Category:</b> Poison</p> <p><b>8.2 49 CFR Class:</b> 6.1</p> <p><b>8.3 49 CFR Package Group:</b> II</p> <p><b>8.4 Marine Pollutant:</b> Yes</p> <p><b>8.5 NFPA Hazard Classification:</b> Not listed</p> <p><b>8.6 EPA Reportable Quantity:</b> 1 pound</p> <p><b>8.7 EPA Pollution Category:</b> X</p> <p><b>8.8 RCRA Waste Number:</b> U061</p> <p><b>8.9 EPA FWPCA List:</b> Yes</p>   |   |   |          |   |   |
| <b>9. PHYSICAL &amp; CHEMICAL PROPERTIES</b>   |   |   |          |   |   |
| <p><b>9.1 Physical State at 15°C and 1 atm:</b> Solid</p> <p><b>9.2 Molecular Weight:</b> 354.5</p> <p><b>9.3 Boiling Point at 1 atm:</b> Not pertinent</p> <p><b>9.4 Freezing Point:</b> 226°F = 108°C = 381°K</p> <p><b>9.5 Critical Temperature:</b> Not pertinent</p> <p><b>9.6 Critical Pressure:</b> Not pertinent</p> <p><b>9.7 Specific Gravity:</b> 1.56 at 15°C (solid)</p> <p><b>9.8 Liquid Surface Tension:</b> Not pertinent</p> <p><b>9.9 Liquid Water Interfacial Tension:</b> Not pertinent</p> <p><b>9.10 Vapor (Gas) Specific Gravity:</b> Not pertinent</p> <p><b>9.11 Ratio of Specific Heats of Vapor (Gas):</b> Not pertinent</p> <p><b>9.12 Latent Heat of Vaporization:</b> Not pertinent</p> <p><b>9.13 Heat of Combustion:</b> Not pertinent</p> <p><b>9.14 Heat of Decomposition:</b> Not pertinent</p> <p><b>9.15 Heat of Solution:</b> Not pertinent</p> <p><b>9.16 Heat of Polymerization:</b> Not pertinent</p> <p><b>9.17 Heat of Fusion:</b> Currently not available</p> <p><b>9.18 Limiting Value:</b> Currently not available</p> <p><b>9.19 Reid Vapor Pressure:</b> Currently not available</p>   |   |   |          |   |   |
| <b>NOTES</b>   |   |   |          |   |   |

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| 9.20<br>SATURATED LIQUID DENSITY |                       | 9.21<br>LIQUID HEAT CAPACITY |                                     | 9.22<br>LIQUID THERMAL CONDUCTIVITY |   | 9.23<br>LIQUID VISCOSITY   |               |
|----------------------------------|-----------------------|------------------------------|-------------------------------------|-------------------------------------|---|----------------------------|---------------|
| Temperature<br>(degrees F)       | Pounds per cubic foot | Temperature<br>(degrees F)   | British thermal unit per<br>pound-F | Temperature<br>(degrees F)          | British thermal unit inch<br>per hour-square foot-F | Temperature<br>(degrees F) | Centipoise    |
| NOT PERTINENT                    |                       |                              | NOT PERTINENT                       |                                     | NOT PERTINENT                                       |                            | NOT PERTINENT |

| 9.24<br>SOLUBILITY IN WATER |                                   | 9.25<br>SATURATED VAPOR PRESSURE |                        | 9.26<br>SATURATED VAPOR DENSITY |                       | 9.27<br>IDEAL GAS HEAT CAPACITY |                                     |
|-----------------------------|-----------------------------------|----------------------------------|------------------------|---------------------------------|-----------------------|---------------------------------|-------------------------------------|
| Temperature<br>(degrees F)  | Pounds per 100 pounds<br>of water | Temperature<br>(degrees F)       | Pounds per square inch | Temperature<br>(degrees F)      | Pounds per cubic foot | Temperature<br>(degrees F)      | British thermal unit per<br>pound-F |
| INSOLUBLE                   |                                   |                                  | NOT PERTINENT          |                                 | NOT PERTINENT         |                                 | NOT PERTINENT                       |