DICHLONE

DCL

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	
2,3-Dichloro-1,4-naphthoquinone Phygon Phygon-XL	Solid crystalline Yellow Sinks and mixes with water.

Keep people away. Avoid contact with solid.
Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves).
Notify local health and pollution control agencies.
Protect water intakes.

Fire	Not flammable.
Exposure	CALL FOR MEDICAL AID. DUST Irritating to eyes, skin, nose, and throat. Move to fresh air. Flush affected areas with plenty of water. IF IN EYES, hold eyelids open and flush with plenty of water. SOLID Harmful if swallowed. IF SWALLOWED and victim is CONSCIOUS, have victim drinkwater or milk and induce vomiting.
Water Pollution	HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS. 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: Pump; Dredge

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.
2.2 Formula: $C_{10}H_4Cl_2O_2$
2.3 IMO/UN Designation: 6.1/1609 (>10%); 9/1609 (<10%)
2.4 DOT ID No.: Not listed
2.5 CAS Registry No.: 117-80-6
2.6 NAERG Guide No.: Not listed
2.7 Standard Industrial Trade Classification: 51629

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Self-contained breathing apparatus, rubber gloves, hats, suits, and boots.
3.2 Symptoms Following Exposure: INHALATION: Irritation to mucous membrane. EYES: Irritation. SKIN: Irritation. INGESTION: Can cause CNS depression.
3.3 Treatment of Exposure: Call a physician. EYES: Flush with water. SKIN: Wash. INGESTION: Gastric lavage for large doses. For small doses, give activated charcoal, follow in 3 to 4 hours with sodium sulfate cathartic.
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; LD_{50} = 0.5 to 5 g/kg.
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: A 2-year rat feeding study had no effect on weight, longevity, or reproduction. Irritating to skin. May cause dermatitis.
3.10 Vapor (Gas) Irritant Characteristics: Currently not available
3.11 Liquid or Solid Characteristics: Currently not available
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: Not pertinent
4.2 Flammable Limits in Air: Not pertinent
4.3 Fire Extinguishing Agents: Currently not available
4.4 Fire Extinguishing Agents Not to Be Used: Currently not available
4.5 Special Hazards of Combustion Products: Highly toxic fumes are imminent.
4.6 Behavior in Fire: Currently not available
4.7 Auto Ignition Temperature: Not pertinent
4.8 Electrical Hazards: Not pertinent
4.9 Burning Rate: Not pertinent
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric 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: Not pertinent
5.5 Polymerization: Currently not available
5.6 Inhibitor of Polymerization: Currently not available

6. WATER POLLUTION

6.1 Aquatic Toxicity:
48-hour TL_m - Bluegill = 0.12 ppm
96-hour TL_m - Trout = 0.074 ppm
96-hour TL_m - Catfish = 0.14 ppm
96-hour LC_{50} - Bluegill = 0.04 ppm
6.2 Waterfowl Toxicity: Young mallards = >2000 mg/kg
6.3 Biological Oxygen Demand (BOD): Currently not available
6.4 Food Chain Concentration Potential: None likely - susceptible to hydrolysis and decomposition.
6.5 GESAMP Hazard Profile: Not listed

7. SHIPPING INFORMATION

7.1 Grades of Purity: Technical grade - 95%
7.2 Storage Temperature: Currently not available
7.3 Inert Atmosphere: Currently not available
7.4 Venting: Currently not available
7.5 IMO Pollution Category: Currently not available
7.6 Ship Type: Currently not available
7.7 Barge Hull Type: Currently not available

8. HAZARD CLASSIFICATIONS

8.1 49 CFR Category: Not listed
8.2 49 CFR Class: Not pertinent
8.3 49 CFR Package Group: Not listed.
8.4 Marine Pollutant: No
8.5 NFPA Hazard Classification: Not listed
8.6 EPA Reportable Quantity: 1 pound
8.7 EPA Pollution Category: X
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: Solid
9.2 Molecular Weight: 227.06
9.3 Boiling Point at 1 atm: Sublimes 527°F = 275°C = 548.15°K
9.4 Freezing Point: Pure: 379.4°F = 193°C = 466.2°K Technical: 370.4°F = 188°C = 461.2°K
9.5 Critical Temperature: Currently not available
9.6 Critical Pressure: Currently not available
9.7 Specific Gravity: Currently not available
9.8 Liquid Surface Tension: Not pertinent
9.9 Liquid Water Interfacial Tension: Not pertinent
9.10 Vapor (Gas) Specific Gravity: 7.84
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: 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

DICHLONE

DCL

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
	NOT PERTINENT		NOT PERTINENT		NOT PERTINENT		NOT PERTINENT

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
	NOT PERTINENT		SUBLIMES	527	0.00083		CURRENTLY NOT AVAILABLE