M-DICHLOROBENZENE

DBM

CAUTIONARY RESPONSE INFORMATION

Common Synonyms	Liquid Colorless
1,3-Dichlorobenzene meta-Dichlorobenzene	Sinks in water.

Keep people away. Avoid contact with liquid.
Wear goggles and self-contained breathing apparatus.
Shut off ignition sources and call fire department.
Notify local health and pollution control agencies.
Protect water intakes.

Fire

Combustible
POISONOUS GASES ARE PRODUCED IN FIRE.
Wear goggles and self-contained breathing apparatus.
Extinguish with water, dry chemical, foam, or carbon dioxide.
Cool exposed containers with water.

Exposure

CALL FOR MEDICAL AID.

LIQUID
Irritating to skin and eyes.
Harmful if swallowed.
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 and have victim induce vomiting.
IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS, do nothing except keep victim warm.

Water Pollution

HARMFUL TO AQUATIC LIFE IN VERY LOW CONCENTRATIONS.
May be dangerous if it enters water intakes.
Notify local health and pollution control officials.
Notify operators of nearby water intakes.

1. CORRECTIVE RESPONSE ACTIONS

Stop discharge
Contain
Collection Systems: Pump; Dredge
Do not burn

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: 36; Halogenated hydrocarbon.
2.2 Formula: $C_6H_4Cl_2$
2.3 IMO/UN Designation: 6.1/1591
2.4 DOT ID No.: Not listed
2.5 CAS Registry No.: 25321-22-6
2.6 NAERG Guide No.: 152
2.7 Standard Industrial Trade Classification: 51139

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Goggles, rubber gloves and self-contained breathing apparatus.
3.2 Symptoms Following Exposure: INHALATION: Causes headache, drousiness, unsteadiness. Irritating to mucous membranes. EYES: Severe irritation. SKIN: Severe irritation. INGESTION: Irritation of gastric mucosa, nausea, vomiting, diarrhea, abdominal cramps and cyanosis.
3.3 Treatment of Exposure: Get medical aid. INHALATION: Remove from exposure. Keep quiet and warm. EYES: Rinse with running water for 15 to 20 minutes. SKIN: Wash with soap and water. INGESTION: Wash mouth, give emetic.
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} = 500 to 5000 mg/kg.
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: May cause some liver and kidney damage.
3.10 Vapor (Gas) Irritant Characteristics: Vapors cause moderate irritation such that personnel will find high concentrations unpleasant. 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 skin.
3.12 Odor Threshold: .02 ppm in water.
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: (est.) 165°F O.C. 151°F C.C.
4.2 Flammable Limits in Air: (est.) 2.02% - 9.2%.
4.3 Fire Extinguishing Agents: Water, foam, carbon dioxide or dry or dry chemical.
4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent
4.5 Special Hazards of Combustion Products: Irritating vapors including hydrogen chloride are produced.
4.6 Behavior in Fire: Not pertinent
4.7 Auto Ignition Temperature: (est.) 1198°F.
4.8 Electrical Hazards: None
4.9 Burning Rate: Currently not available
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 30.9 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 9.0 (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: 10 ppm/48-hour/Zebrafish/LC_{50}.
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: Z
Damage to living resources: 3
Human Oral hazard: 1
Human Contact hazard: I
Reduction of amenities: X

7. SHIPPING INFORMATION

7.1 Grades of Purity: Currently not available
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: B
7.6 Ship Type: 2
7.7 Barge Hull Type: 3

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: Yes
8.5 NFPA Hazard Classification: Not listed
8.6 EPA Reportable Quantity: 100 pounds
8.7 EPA Pollution Category: B
8.8 RCRA Waste Number: U071
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: 147.01.
9.3 Boiling Point at 1 atm: 343.4°F = 173°C = 446.15°K
9.4 Freezing Point: –12.5°F = 24.7°C = 248.45°K.
9.5 Critical Temperature: (est.) 771.44°F = 410.8°C = 683.95°K.
9.6 Critical Pressure: 562.9 psia = 38.3 atm = 3.88 NM/m^2
9.7 Specific Gravity: 1.2884 at 20°C.
9.8 Liquid Surface Tension: 36.01 dynes/cm = 0.03601 N/m at 20°C.
9.9 Liquid Water Interfacial Tension: Currently not available
9.10 Vapor (Gas) Specific Gravity: 5.07.
9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available
9.12 Latent Heat of Vaporization: At boiling point. 113.02 Btu/lb = 62.79 cal/g = 2.63 X 10^5
9.13 Heat of Combustion: (net) –8096 Btu/lb = 4498 cal/g = –1.88 X 10^7 J/kg.
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: 20.55 cal/g
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
15	79.492		C		.		C
20	79.485		U		.		U
25	79.476		R				R
30	79.467		R				R
35	79.459		E				E
40	79.450		N				N
45	79.441		T				T
50	79.433		L				L
55	79.424		Y				Y
60	79.417						
65	79.408		N				N
70	79.400		O				O
75	79.391		T				T
80	79.382						
85	79.374		A				A
90	79.365		V				V
95	79.356		A				A
100	79.349		I				I
105	79.339		L				L
110	79.332		A				A
115	79.323		B				B
120	79.315		L				L
			E				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
	I	55	0.021	55	0.48431	625	0.305
	N	60	0.024	60	0.55781	650	0.311
	S	65	0.029	65	0.64247	675	0.317
	O	70	0.033	70	0.73998	700	0.322
	L	75	0.039	75	0.85228	725	0.328
	U	80	0.045	80	0.98163	750	0.333
	B	85	0.053	85	1.13061	775	0.339
	L	90	0.062	90	1.30220	800	0.344
	E	95	0.072	95	1.49983	825	0.350
		100	0.084	100	1.72745	850	0.356
		105	0.098	105	1.98962	875	0.361
		110	0.115	110	2.29158	900	0.367
		115	0.134	115	2.63937	925	0.372
		120	0.157	120	3.03994	950	0.378
		125	0.183	125	3.50130	975	0.383
		130	0.213	130	4.03269	1000	0.389
		135	0.249	135	4.64471	1025	0.395
		140	0.291	140	5.34963	1050	0.400
		145	0.339	145	6.16152	1075	0.406
		150	0.396	150	7.09664	1100	0.411
						1125	0.417
						1150	0.422
						1175	0.428
						1200	0.434
						1225	0.439
						1250	0.445