CHLOROPRENE

CRP

CAUTIONARY RESPONSE INFORMATION

Common Synonyms
2-Chlorobutadiene
2-Chloro-1,3-butadiene
2-Chlorobuta-1,3-diene
beta-Chloroprene

Liquid Colorless Slight etheric

Floats and mixes slowly with water. Flammable, irritating vapor is produced.

Evacuate.
Keep people away. Avoid contact with liquid and vapor.
Wear goggles, self-contained breathing apparatus, and rubber clothing (including gloves).
Shut off ignition sources and call fire department.
Notify local health and pollution control agencies.
Protect water intakes.

Fire

Flammable.
POISONOUS GAS IS PRODUCED IN FIRE.
Flashback along vapor trail may occur.
Containers may explode in fire.
Wear self-contained breathing apparatus.
Combat fires from safe distance or protected location.
Extinguish with alcohol foam.
Water may be ineffective on fire.

Exposure

CALL FOR MEDICAL AID.

VAPOR
Irritating to eyes, nose, and throat.
If inhaled will cause difficult breathing and asphyxia.
Move to fresh air.
If breathing has stopped, give artificial respiration.
If breathing is difficult, give oxygen.

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.

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 undissolved material
Dilute and disperse dissolved material
Collection Systems: Skim; Dredge

2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.
2.2 Formula: $CH_2CHCClCH_2$
2.3 IMO/UN Designation: 3.2/1991
2.4 DOT ID No.: 1991
2.5 CAS Registry No.: 126-99-8
2.6 NAERG Guide No.: 131P
2.7 Standard Industrial Trade Classification: 51139

3. HEALTH HAZARDS

3.1 Personal Protective Equipment: Safety goggles, air line or self-contained oxygen mask.
3.2 Symptoms Following Exposure: INHALATION: Fatigue, psychic changes, irritability, oppression in chest, occasionally substernal pain, tachycardia upon exertion. EYES: Can cause conjunctivitis, corneal necrosis and edema of eyelids. SKIN: May cause dermatitis and temporary loss of hair. Rapidly absorbed by skin.
3.3 Treatment of Exposure: Call a doctor. INHALATION: Prompt removal from exposure. If not breathing give artificial respiration. If respiration is impaired, oxygen should be given. EYES: Flush with water. SKIN: Clean with soap and water. INGESTION: Gastric lavage followed by saline catharsis.
3.4 TLV-TWA: 10 ppm
3.5 TLV-STEL: Not listed.
3.6 TLV-Ceiling: Not listed.
3.7 Toxicity by Ingestion: Grade 3; LD_{50} = 50 to 500 mg/kg.
3.8 Toxicity by Inhalation: Currently not available.
3.9 Chronic Toxicity: May cause dermatitis, conjunctivitis, corneal necrosis, anemia, loss of hair (temporary), nervousness, and irritability. CNS depression and significant injury to lungs, liver, and kidneys. Suspected carcinogen, and mutagen. In animal experiments has caused degenerative changes of reproductive organs with the males being more susceptible.
3.10 Vapor (Gas) Irritant Characteristics: Vapors are moderately irritating such that personnel will not usually tolerate moderate or high concentrations.
3.11 Liquid or Solid Characteristics: Currently not available
3.12 Odor Threshold: 0.40 mg/m^3 (recognition).
3.13 IDLH Value: 300 ppm
3.14 OSHA PEL-TWA: 25 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: -4°F C.C.
4.2 Flammable Limits in Air: 4% lower, 20% upper
4.3 Fire Extinguishing Agents: Alcohol foam
4.4 Fire Extinguishing Agents Not to Be Used: Water may be ineffective.
4.5 Special Hazards of Combustion Products: Decomposes yielding toxic fumes
4.6 Behavior in Fire: Dangerous when exposed to heat or flame
4.7 Auto Ignition Temperature: Currently not available
4.8 Electrical Hazards: Currently not available
4.9 Burning Rate: Currently not available
4.10 Adiabatic Flame Temperature: Currently not available
4.11 Stoichometric Air to Fuel Ratio: 23.8 (calc.)
4.12 Flame Temperature: Currently not available
4.13 Combustion Molar Ratio (Reactant to Product): 7.0 (calc.)
4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed

5. CHEMICAL REACTIVITY

5.1 Reactivity with Water: Currently not available
5.2 Reactivity with Common Materials: Currently not available
5.3 Stability During Transport: Currently not available
5.4 Neutralizing Agents for Acids and Caustics: Currently not available
5.5 Polymerization: Polymerizes readily under the influence of light and catalysts
5.6 Inhibitor of Polymerization: Currently not available

6. WATER POLLUTION

6.1 Aquatic Toxicity: Finfish/TL_m/96 hour = 10 to 100 ppm
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: Not listed

7. SHIPPING INFORMATION

7.1 Grades of Purity: Currently not available
7.2 Storage Temperature: Cool
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: Flammable liquid
8.2 49 CFR Class: 3
8.3 49 CFR Package Group: I
8.4 Marine Pollutant: No
8.5 NFPA Hazard Classification:

Category	Classification
Health Hazard (Blue).....	2
Flammability (Red).....	3
Instability (Yellow).....	0

8.6 EPA Reportable Quantity: 100 pounds
8.7 EPA Pollution Category: B
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: 88.54
9.3 Boiling Point at 1 atm: 138.92°F = 59.4°C = 332.6°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: 0.9583 at 20°C
9.8 Liquid Surface Tension: Currently not available
9.9 Liquid Water Interfacial Tension: Currently not available
9.10 Vapor (Gas) Specific Gravity: 3.0
9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available
9.12 Latent Heat of Vaporization: (est.) 164 Btu/lb = 91.2 cal/g = 3.8 X 10^5 J/kg
9.13 Heat of Combustion: Currently not available
9.14 Heat of Decomposition: Currently not available
9.15 Heat of Solution: Currently not available
9.16 Heat of Polymerization: per mode of of monomer at 61.3°C (142.34°F) 3.30 Btu/lb = 183.6 cal/g = 7.68 X 10^5 J/kg
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
68	59.820		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE		CURRENTLY NOT AVAILABLE

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
	SLIGHTLY SOLUBLE	45	1.575	25	0.01554		CURRENTLY NOT AVAILABLE
		50	1.779	30	0.01746		
		55	2.010	35	0.01961		
		60	2.270	40	0.02203		
		65	2.564	45	0.02474		
		70	2.897	50	0.02779		
		75	3.272	55	0.03122		
		80	3.696	60	0.03507		
		85	4.174	65	0.03940		
		90	4.715	70	0.04425		
		95	5.326	75	0.04971		
		100	6.016	80	0.05584		
		105	6.795	85	0.06272		
		110	7.676	90	0.07046		
		115	8.670	95	0.07914		
		120	9.793	100	0.08890		
		125	11.062	105	0.09986		
		130	12.494	110	0.11218		
		135	14.113	115	0.12601		
				120	0.14155		
				125	0.15900		
				130	0.17860		
				135	0.20063		