

# LAURYL MERCAPTAN

LRM

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b>		Oily liquid	Colorless	Mild skunk odor
1-Dodecanethiol Dodecyl mercaptan		Floats on water. Freezing point is 19°F.		
<p>Keep people away. Wear goggles and self-contained breathing apparatus. Avoid contact with liquid. Shut off ignition sources and call fire department. Notify local health and pollution control agencies.</p>				
<b>Fire</b>	Combustible POISONOUS GASES ARE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus. Extinguish with dry chemical, foam, or carbon dioxide. Water may be ineffective on fire. Cool exposed containers with water.			
<b>Exposure</b>	CALL FOR MEDICAL AID.  LIQUID OR SOLID Irritating to skin and eyes. If swallowed, will cause nausea. 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.			
<b>Water Pollution</b>	Effect of low concentrations on aquatic life is unknown. Fouling to shoreline. 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: Skim  
Clean shore line  
Salvage waterfowl

### 2. CHEMICAL DESIGNATIONS

2.1 CG Compatibility Group: Not listed.  
2.2 Formula:  $\text{CH}_2(\text{CH}_2)_{10}\text{CH}_2\text{SH}$   
2.3 IMO/UN Designation: Not listed  
2.4 DOT ID No.: Not listed  
2.5 CAS Registry No.: Currently not available  
2.6 NAERG Guide No.: Not listed  
2.7 Standard Industrial Trade Classification: 51549

### 3. HEALTH HAZARDS

- 3.1 **Personal Protective Equipment:** Respirator when mist is present; rubber or vinyl gloves; chemical goggles; rubber shoes and apron.
- 3.2 **Symptoms Following Exposure:** Liquid is irritating to skin, eyes, and mucous membranes. Ingestion may cause nausea. Repeated skin exposure can cause dermatitis and may produce a sensitizing effect.
- 3.3 **Treatment of Exposure:** Get medical attention for all eye exposures and any other serious over-exposures. **INHALATION (mist):** rinse mouth repeatedly with cold water; treatment is symptomatic. **INGESTION:** dilute by drinking water; if vomiting occurs, drink more water; administer saline laxative. **EYES:** flush thoroughly with water; ventilation by electric fan is helpful in removing last traces, especially around eyes and eyelids. **SKIN:** remove contaminated clothing; flush skin with water; wash exposed area with soap and water.
- 3.4 **TLV-TWA:** Not listed.  
3.5 **TLV-STEL:** Not listed.  
3.6 **TLV-Ceiling:** Not listed.  
3.7 **Toxicity by Ingestion:** Currently not available  
3.8 **Toxicity by Inhalation:** Currently not available.  
3.9 **Chronic Toxicity:** Causes decline in kidney and liver function in rats.  
3.10 **Vapor (Gas) Irritant Characteristics:** Irritating concentrations of vapor unlikely, but mist can cause irritation of eyes and upper respiratory tract.  
3.11 **Liquid or Solid Characteristics:** Minimum hazard. If spilled on clothing and allowed to remain, may cause smarting and reddening of the skin.  
3.12 **Odor Threshold:** 4 mg/m<sup>3</sup>  
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:** 262°F O.C.  
4.2 **Flammable Limits in Air:** Currently not available  
4.3 **Fire Extinguishing Agents:** Dry chemical, foam, or carbon dioxide  
4.4 **Fire Extinguishing Agents Not to Be Used:** Water or foam may cause frothing.  
4.5 **Special Hazards of Combustion Products:** Poisonous and irritating gases (e.g., sulfur dioxide) are generated in fires.  
4.6 **Behavior in Fire:** Not pertinent  
4.7 **Auto Ignition Temperature:** Currently not available  
4.8 **Electrical Hazards:** Not pertinent  
4.9 **Burning Rate:** Currently not available  
4.10 **Adiabatic Flame Temperature:** Currently not available  
4.11 **Stoichiometric Air to Fuel Ratio:** 92.8 (calc.)  
4.12 **Flame Temperature:** Currently not available  
4.13 **Combustion Molar Ratio (Reactant to Product):** 26.0 (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 Causatics:** Not pertinent  
5.5 **Polymerization:** Not pertinent  
5.6 **Inhibitor of Polymerization:** Not pertinent

### 6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:** Currently not available  
6.2 **Waterfowl Toxicity:** Currently not available  
6.3 **Biological Oxygen Demand (BOD):** Currently not available  
6.4 **Food Chain Concentration Potential:** None  
6.5 **GESAMP Hazard Profile:**  
Bioaccumulation: 0  
Damage to living resources: -  
Human Oral hazard: -  
Human Contact hazard: I  
Reduction of amenities: XX

### 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 95% minimum  
7.2 **Storage Temperature:** Ambient  
7.3 **Inert Atmosphere:** No requirement  
7.4 **Venting:** Open (flame arrester)  
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:**
- | Category                  | Classification |
|---------------------------|----------------|
| Health Hazard (Blue)..... | 2              |
| Flammability (Red).....   | 1              |
| 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:** Not listed

### 9. PHYSICAL & CHEMICAL PROPERTIES

- 9.1 **Physical State at 15° C and 1 atm:** Liquid  
9.2 **Molecular Weight:** 202  
9.3 **Boiling Point at 1 atm:** Very high  
9.4 **Freezing Point:** 19.4°F = -7.0°C = 266.2°K  
9.5 **Critical Temperature:** Not pertinent  
9.6 **Critical Pressure:** Not pertinent  
9.7 **Specific Gravity:** 0.85 at 15°C (liquid)  
9.8 **Liquid Surface Tension:** (est.) 30 dynes/cm = 0.03 N/m at 20°C  
9.9 **Liquid Water Interfacial Tension:** (est.) 30 dynes/cm = 0.03 N/m at 20°C  
9.10 **Vapor (Gas) Specific Gravity:** Not pertinent  
9.11 **Ratio of Specific Heats of Vapor (Gas):** Not pertinent  
9.12 **Latent Heat of Vaporization:** (est.) 110 Btu/lb = 60 cal/g = 2.5 X 10<sup>5</sup> J/kg  
9.13 **Heat of Combustion:** (est.) -18,200 Btu/lb = -10,100 cal/g = -422 X 10<sup>3</sup> J/kg  
9.14 **Heat of Decomposition:** Not pertinent  
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

# LAURYL MERCAPTAN

LRM

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
51	53.310	50	0.525	50	1.040	60	3.358
52	53.280	52	0.525	52	1.040	70	2.965
53	53.250	54	0.525	54	1.040	80	2.631
54	53.220	56	0.525	56	1.040	90	2.344
55	53.190	58	0.525	58	1.040	100	2.098
56	53.160	60	0.525	60	1.040	110	1.884
57	53.130	62	0.525	62	1.040	120	1.699
58	53.100	64	0.525	64	1.040	130	1.537
59	53.070	66	0.525	66	1.040	140	1.395
60	53.050	68	0.525	68	1.040	150	1.271
61	53.020	70	0.525	70	1.040	160	1.161
62	52.990	72	0.525	72	1.040	170	1.063
63	52.960	74	0.525	74	1.040	180	0.977
64	52.930	76	0.525	76	1.040	190	0.900
65	52.900	78	0.525	78	1.040	200	0.831
66	52.870	80	0.525	80	1.040	210	0.769
67	52.840	82	0.525	82	1.040		
68	52.810	84	0.525	84	1.040		

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	50	0.000	50	0.00002		N
	N	52	0.001	52	0.00002		O
	S	54	0.001	54	0.00002		T
	O	56	0.001	56	0.00002		
	L	58	0.001	58	0.00002		P
	U	60	0.001	60	0.00003		E
	B	62	0.001	62	0.00003		R
	L	64	0.001	64	0.00003		T
	E	66	0.001	66	0.00003		I
		68	0.001	68	0.00003		N
		70	0.001	70	0.00004		E
		72	0.001	72	0.00004		N
		74	0.001	74	0.00004		T
		76	0.001	76	0.00005		
		78	0.001	78	0.00005		
		80	0.002	80	0.00005		
		82	0.002	82	0.00006		
		84	0.002	84	0.00006		