

DODECYLBENZENESULFONIC ACID

DSA

CAUTIONARY RESPONSE INFORMATION

Common Synonyms Conoco SA 597 Laurylbenzenesulfonic acid Nacconol 988 A	Liquid	Light yellow to brown	Possible odor of SO#M2
	Mixes with water.		
<p>Keep people away. Avoid contact with liquid. Avoid inhalation. Wear goggles, self-contained breathing apparatus, and rubber overclothing (including gloves). Notify local health and pollution control agencies. Protect water intakes.</p>			
Fire	<p>Combustible. POISONOUS GASES MAY BE PRODUCED IN FIRE. Wear goggles and self-contained breathing apparatus. Extinguish with water (fog nozzle), carbon dioxide, or dry powder.</p>		
Exposure	<p>CALL FOR MEDICAL AID.</p> <p>LIQUID Will burn skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush exposed 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 induce vomiting.</p>		
Water Pollution	<p>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.</p>		

1. CORRECTIVE RESPONSE ACTIONS Dilute and disperse Stop discharge	2. CHEMICAL DESIGNATIONS 2.1 CG Compatibility Group: Not listed. 2.2 Formula: C ₁₂ H ₂₅ SO ₃ 2.3 IMO/UN Designation: Not listed 2.4 DOT ID No.: 2584 2.5 CAS Registry No.: 27176-87-0 2.6 NAERG Guide No.: 153 2.7 Standard Industrial Trade Classification: 51377
3. HEALTH HAZARDS	
<p>3.1 Personal Protective Equipment: Goggles, rubber gloves, air pack for contact with fumes in unventilated area.</p> <p>3.2 Symptoms Following Exposure: EYES AND SKIN: A 0.5% to 1% concentration in water caused significant irritation. The technical grade is corrosive and may cause irreversible damage to eyes and skin. INGESTION: Irritation of the mouth, esophagus and stomach. Diarrhea, intestinal distention and occasional vomiting.</p> <p>3.3 Treatment of Exposure: Call a physician. EYES AND SKIN: Flush eyes and skin with plenty of water for at least 15 minutes. Remove contaminated clothing and shoes. INGESTION: Give fluids and allow vomiting. See physician.</p> <p>3.4 TLV-TWA: Not listed. 3.5 TLV-STEL: Not listed. 3.6 TLV-Ceiling: Not listed. 3.7 Toxicity by Ingestion: Grade 3; LD₅₀ = 50 to 500 mg/kg (mouse). 3.8 Toxicity by Inhalation: Currently not available. 3.9 Chronic Toxicity: Affected serum enzymes and electrolytes. Decrease in fetal body weight, length and construction. May facilitate penetration of carcinogens into gastric mucosa. 3.10 Vapor (Gas) Irritant Characteristics: Currently not available 3.11 Liquid or Solid Characteristics: Fairly severe skin irritant. May cause pain and second-degree burns after a few minutes contact. 3.12 Odor Threshold: 200 mg/l affected odor of 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</p>	

4. FIRE HAZARDS

- 4.1 **Flash Point:** 300°F O.C.
4.2 **Flammable Limits in Air:** Currently not available
4.3 **Fire Extinguishing Agents:** Water (Fog Nozzle), CO₂, dry powder
4.4 **Fire Extinguishing Agents Not to Be Used:** Currently not available
4.5 **Special Hazards of Combustion Products:** May give off SO₂, SO₃ and H₂S
4.6 **Behavior in Fire:** Currently not available
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 **Stoichiometric Air to Fuel Ratio:** 119.0 (calc.)
4.12 **Flame Temperature:** Currently not available
4.13 **Combustion Molar Ratio (Reactant to Product):** 34.0 (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:** Do not store in carbon steel or aluminum.
5.3 **Stability During Transport:** Stable
5.4 **Neutralizing Agents for Acids and Caustics:** Flush with water, rinse with dilute sodium bicarbonate or soda ash solution
5.5 **Polymerization:** Currently not available
5.6 **Inhibitor of Polymerization:** Currently not available

6. WATER POLLUTION

- 6.1 **Aquatic Toxicity:**
4.2 to 5.6 ppm/96-hour/Fathead minnows, Bluegills/TLV/soft water
3.5 to 4.4 ppm/96-hour/Fathead minnows/TLV/hard water
5 to 15 ppm/guppy/lethal concentration
0.05 ppm reduced fertility rate of common mussel
5 ppm reduced percentage of fertilized eggs of fish
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: 3
Human Oral hazard: 1
Human Contact hazard: 1
Reduction of amenities: X

7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** 95% to 97.5%
7.2 **Storage Temperature:** Ambient
7.3 **Inert Atmosphere:** No requirement
7.4 **Venting:** Open
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:** Corrosive material
8.2 **49 CFR Class:** 8
8.3 **49 CFR Package Group:** II
8.4 **Marine Pollutant:** No
8.5 **NFPA Hazard Classification:** Not listed
8.6 **EPA Reportable Quantity:** 1000 pounds
8.7 **EPA Pollution Category:** C
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:** Liquid
9.2 **Molecular Weight:** 316 average
9.3 **Boiling Point at 1 atm:** >204°F = >204.5°C = >477.7°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:** 1 at 25°C
9.8 **Liquid Surface Tension:** Currently not available
9.9 **Liquid Water Interfacial Tension:** Currently not available
9.10 **Vapor (Gas) Specific Gravity:** Currently not available
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:** Currently not available
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

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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
75	67.238		C		C	70	1056.765
80	67.052		U		U	75	877.728
85	66.879		R		R	80	737.813
90	66.714		R		R	85	626.767
95	66.558		E		E	90	537.423
100	66.412		N		N	95	464.663
105	66.271		T		T	100	404.764
110	66.138		L		L	105	354.969
115	66.009		Y		Y	110	313.207
120	65.886					115	277.900
125	65.770		N		N	120	247.832
130	65.657		O		O	125	222.053
135	65.549		T		T	130	199.816
140	65.443					135	180.521
145	65.344		A		A	140	163.693
150	65.245		V		V		
155	65.151		A		A		
			I		I		
			L		L		
			A		A		
			B		B		
			L		L		
			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
	S O L U B L E		V E R Y L O W		N O T P E R T I N E N T		C U R R E N T L Y N O T A V A I L A B L E