

# DODECYL DIPHENYL ETHER DISULFONATE SOLUTION

DOS

## CAUTIONARY RESPONSE INFORMATION

<b>Common Synonyms</b> Dodecyl diphenyl ether sulfonate, disodium salt, aqueous solution Dowfax 2A1	Liquid	Light yellow to light brown solution	Disinfectant-type smell
<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>			
<b>Fire</b>	Not flammable		
<b>Exposure</b>	<p>CALL FOR MEDICAL AID.</p> <p>LIQUID Will burn skin and eyes. Harmful if swallowed. Remove contaminated clothing and shoes. Flush affected areas with 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. IF SWALLOWED and victim is UNCONSCIOUS OR HAVING CONVULSIONS: do nothing except keep victim warm.</p>		
<b>Water Pollution</b>	<p>HARMFUL TO AQUATIC LIFE IN LOW CONCENTRATIONS. Harmful if it enters local water intakes. Notify local health and wildlife officials. Notify operators of local water intakes.</p>		

<p><b>1. CORRECTIVE RESPONSE ACTIONS</b> Stop discharge Dilute and disperse</p>	<p><b>2. CHEMICAL DESIGNATIONS</b>  <b>2.1 CG Compatibility Group:</b> 43; Misc. Water Solutions  <b>2.2 Formula:</b> (Na)<sub>2</sub>[C<sub>12</sub>H<sub>25</sub>C<sub>2</sub>H<sub>4</sub>(SO<sub>3</sub>)<sub>2</sub>O] in H<sub>2</sub>O  <b>2.3 IMO/UN Designation:</b> Not Listed  <b>2.4 DOT ID No.:</b> Not Listed  <b>2.5 CAS Registry No.:</b> 25167-32-2  <b>2.6 NAERG Guide No.:</b> Not listed  <b>2.7 Standard Industrial Trade Classification:</b> 51616</p>
<p><b>3. HEALTH HAZARDS</b></p> <p>3.1 <b>Personal Protective Equipment:</b> Goggles, rubber gloves, approved mist respirator, protective clothing.</p> <p>3.2 <b>Symptoms Following Exposure:</b> EYES AND SKIN: The solution 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 <b>Treatment of Exposure:</b> Call a physician. EYES AND SKIN: Flush eyes and skin with plenty of water for at least 30 minutes. Remove contaminated clothing and shoes. INGESTION: Give fluids and induce vomiting.</p> <p>3.4 <b>TLV-TWA:</b> Not listed.          3.5 <b>TLV-STEL:</b> Not listed.          3.6 <b>TLV-Ceiling:</b> Not listed.          3.7 <b>Toxicity by Ingestion:</b> Grade 2; LD<sub>50</sub> = 700 mg/kg (rat)          3.8 <b>Toxicity by Inhalation:</b> Currently not available.          3.9 <b>Chronic Toxicity:</b> Excessive exposure may cause liver and kidney damage.          3.10 <b>Vapor (Gas) Irritant Characteristics:</b> Currently not available          3.11 <b>Liquid or Solid Characteristics:</b> Fairly severe skin irritant. May cause pain and second-degree burns after a few minutes contact.          3.12 <b>Odor Threshold:</b> Currently not available          3.13 <b>IDLH Value:</b> Not listed.          3.14 <b>OSHA PEL-TWA:</b> Not listed.          3.15 <b>OSHA PEL-STEL:</b> Not listed.          3.16 <b>OSHA PEL-Ceiling:</b> Not listed.          3.17 <b>EPA AEGL:</b> Not listed</p>	

## 4. FIRE HAZARDS

- 4.1 **Flash Point:** Not flammable
- 4.2 **Flammable Limits in Air:** Not pertinent
- 4.3 **Fire Extinguishing Agents:** Not pertinent
- 4.4 **Fire Extinguishing Agents Not to Be Used:** Not pertinent
- 4.5 **Special Hazards of Combustion Products:** May generate fumes of SO<sub>2</sub> or H<sub>2</sub>S in fire
- 4.6 **Behavior in Fire:** Organic portion may burn once water has evaporated. Use water to extinguish.
- 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:** 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:** Flush with water, rinse with dilute sodium bicarbonate or soda ash solution.
- 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:** Currently not available
- 6.5 **GESAMP Hazard Profile:** Not listed

## 7. SHIPPING INFORMATION

- 7.1 **Grades of Purity:** Aqueous solution, 47% maximum concentration
- 7.2 **Storage Temperature:** Currently not available
- 7.3 **Inert Atmosphere:** None
- 7.4 **Venting:** None
- 7.5 **IMO Pollution Category:** A
- 7.6 **Ship Type:** 2
- 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:** 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 (water solution)
- 9.2 **Molecular Weight:** 712.95
- 9.3 **Boiling Point at 1 atm:** 212°F = 100°C = 373°K (approximate, varies with concentration)
- 9.4 **Freezing Point:** 32°F = 0°C = 273°K (approximate, varies with concentration)
- 9.5 **Critical Temperature:** Currently not available
- 9.6 **Critical Pressure:** Currently not available
- 9.7 **Specific Gravity:** 1.161 at 25°C
- 9.8 **Liquid Surface Tension:** Currently not available
- 9.9 **Liquid Water Interfacial Tension:** Not pertinent
- 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:** 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

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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
	C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L 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
	C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E		C U R R E N T L Y  N O T  A V A I L A B L E