

# DIBENZYL ETHER

DBN

| CAUTIONARY RESPONSE INFORMATION  |   |   |  | 4. FIRE HAZARDS   | 7. SHIPPING INFORMATION   |                |                           |   |                         |   |                           |   |   |
|--|---|---|--|---|---|----------------|---------------------------|---|-------------------------|---|---------------------------|---|---|
| Common Synonyms<br>Benzyl ether<br>1,1'-(Oxybis(methylene)) bis benzene  | Liquid  | Colorless   | Mild odor  | 4.1 Flash Point: 275°F C.C.<br>4.2 Flammable Limits in Air: Currently not available<br>4.3 Fire Extinguishing Agents: Dry chemical, carbon dioxide<br>4.4 Fire Extinguishing Agents Not to Be Used: Water or foam may cause frothing.<br>4.5 Special Hazards of Combustion Products: Not pertinent<br>4.6 Behavior in Fire: Currently not available<br>4.7 Auto Ignition Temperature: Currently not available<br>4.8 Electrical Hazards: Currently not available<br>4.9 Burning Rate: Currently not available<br>4.10 Adiabatic Flame Temperature: Currently not available<br>4.11 Stoichiometric Air to Fuel Ratio: 80.9 (calc.)<br>4.12 Flame Temperature: Currently not available<br>4.13 Combustion Molar Ratio (Reactant to Product): 21.0 (calc.)<br>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed  | 7.1 Grades of Purity: 99%<br>7.2 Storage Temperature: Currently not available<br>7.3 Inert Atmosphere: Currently not available<br>7.4 Venting: Currently not available<br>7.5 IMO Pollution Category: Currently not available<br>7.6 Ship Type: Currently not available<br>7.7 Barge Hull Type: Currently not available |                |                           |   |                         |   |                           |   |   |
| Keep people away.<br>Shut off ignition sources. Call fire department.<br>Avoid contact with liquid.  |   |   |  | 8. HAZARD CLASSIFICATIONS   |   |                |                           |   |                         |   |                           |   |   |
| Fire<br>Combustible<br>Water and foam may be ineffective on fire.<br>Extinguish with dry chemicals or carbon dioxide   |   |   |  | 8.1 49 CFR Category: Not Listed<br>8.2 49 CFR Class: Not Pertinent<br>8.3 49 CFR Package Group: Not listed.<br>8.4 Marine Pollutant: No<br>8.5 NFPA Hazard Classification:<br><table><tr><td>Category</td><td>Classification</td></tr><tr><td>Health Hazard (Blue).....</td><td>0</td></tr><tr><td>Flammability (Red).....</td><td>1</td></tr><tr><td>Instability (Yellow).....</td><td>0</td></tr></table>   | Category  | Classification | Health Hazard (Blue)..... | 0 | Flammability (Red)..... | 1 | Instability (Yellow)..... | 0 | 8. EPA Reportable Quantities: Not listed.<br>8.7 EPA Pollution Category: Not listed.<br>8.8 RCRA Waste Number: Not listed<br>8.9 EPA FWCNA List: Not listed |
| Category   | Classification  |   |  |   |   |                |                           |   |                         |   |                           |   |   |
| Health Hazard (Blue).....  | 0   |   |  |   |   |                |                           |   |                         |   |                           |   |   |
| Flammability (Red).....  | 1   |   |  |   |   |                |                           |   |                         |   |                           |   |   |
| Instability (Yellow).....  | 0   |   |  |   |   |                |                           |   |                         |   |                           |   |   |
| Exposure<br>CALL FOR MEDICAL AID.<br><br>LIQUID<br>Irritating to skin and eyes.<br>Harmful if swallowed.<br>Remove contaminated clothing and shoes.<br>Flush affected areas with plenty of water.<br>IF IN EYES, hold eyelids open and flush with plenty of water.<br>IF SWALLOWED and victim is CONSCIOUS, have victim drink water or milk. |   |   |  | 9. PHYSICAL & CHEMICAL PROPERTIES   |   |                |                           |   |                         |   |                           |   |   |
| Water Pollution<br>Effect of low concentrations on aquatic life is unknown.<br>Fouling to shoreline.<br>May be dangerous if it enters water intakes.<br>Notify local health and wildlife officials.<br>Notify operators of local water intakes.  |   |   |  | 9.1 Physical State at 15° C and 1 atm: Liquid<br>9.2 Molecular Weight: 198.26<br>9.3 Boiling Point at 1 atm: 568°F = 298°C = 571°K<br>9.4 Freezing Point: 38.5°F = 3.6°C = 277°K<br>9.5 Critical Temperature: Currently not available<br>9.6 Critical Pressure: Currently not available<br>9.7 Specific Gravity: 1.0428 at 20°C<br>9.8 Liquid Surface Tension: Currently not available<br>9.9 Liquid Water Interfacial Tension: Currently not available<br>9.10 Vapor (Gas) Specific Gravity: 6.84<br>9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available<br>9.12 Latent Heat of Vaporization: Currently not available<br>9.13 Heat of Combustion: Currently not available<br>9.14 Heat of Decomposition: Currently not available<br>9.15 Heat of Solution: Currently not available<br>9.16 Heat of Polymerization: Currently not available<br>9.17 Heat of Fusion: Currently not available<br>9.18 Limiting Value: Currently not available<br>9.19 Reid Vapor Pressure: Currently not available | 9. NOTES  |                |                           |   |                         |   |                           |   |   |
| 1. CORRECTIVE RESPONSE ACTIONS<br>Stop discharge   | 2. CHEMICAL DESIGNATIONS<br>2.1 CG Compatibility Group: Not listed.<br>2.2 Formula: <chem>C14H10</chem><br>2.3 IMO/UN Designation: Not listed<br>2.4 DOT ID No.: Not listed<br>2.5 CAS Registry No.: 103-50-4<br>2.6 NAERG Guide No.: Not listed<br>2.7 Standard Industrial Trade Classification: 51616 | 3. HEALTH HAZARDS<br>3.1 Personal Protective Equipment: Goggles or face shield; rubber gloves<br>3.2 Symptoms Following Exposure: Inhalation may cause nausea because of disagreeable odor.<br>Contact of liquid with eyes causes mild irritation. Prolonged exposure of skin to liquid causes reddening and irritation. Ingestion produces nausea.<br>3.3 Treatment of Exposure: EYES: Flush with water for at least 15 minutes. SKIN: Wipe off, wash with soap and water. INGESTION: Induce vomiting and get medical attention.<br>3.4 TLV-TWA: Not listed.<br>3.5 TLV-STEL: Not listed.<br>3.6 TLV-Ceiling: Not listed.<br>3.7 Toxicity by Ingestion: Grade 2; LD <sub>50</sub> = 2.5 g/kg (rat)<br>3.8 Toxicity by Inhalation: Currently not available.<br>3.9 Chronic Toxicity: Currently not available<br>3.10 Vapor (Gas) Irritancy Characteristics: Currently not available<br>3.11 Liquid or Solid Characteristics: Currently not available<br>3.12 Odor Threshold: Currently not available<br>3.13IDLH Value: Not listed.<br>3.14 OSHA PEL-TWA: Not listed.<br>3.15 OSHA PEL-STEL: Not listed.<br>3.16 OSHA PEL-Ceiling: Not listed.<br>3.17 EPA AEGL: Not listed | 4. WATER POLLUTION<br>6.1 Aquatic Toxicity:<br>Currently not available<br>6.2 Waterfowl Toxicity: Currently not available<br>6.3 Biological Oxygen Demand (BOD):<br>Currently not available<br>6.4 Food Chain Concentration Potential:<br>Currently not available<br>6.5 GESAMP Hazard Profile:<br>Bioaccumulation: 0<br>Damage to living resources: 2<br>Human Oral hazard: 1<br>Human Contact hazard: I<br>Reduction of amenities: X |   |   |                |                           |   |                         |   |                           |   |   |

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| 9.20<br>SATURATED LIQUID DENSITY |                       | 9.21<br>LIQUID HEAT CAPACITY |   | 9.22<br>LIQUID THERMAL CONDUCTIVITY |   | 9.23<br>LIQUID VISCOSITY  |  |
|----------------------------------|-----------------------|------------------------------|---|-------------------------------------|---|---|--|
| Temperature<br>(degrees F)       | Pounds per cubic foot | Temperature<br>(degrees F)   | British thermal unit per<br>pound-F   | Temperature<br>(degrees F)          | British thermal unit inch<br>per hour-square foot-F   | Temperature<br>(degrees F)  | Centipoise   |
| 68                               | 65.100                |                              | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E |                                     | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E | 35<br>40<br>45<br>50<br>55<br>60<br>65<br>70<br>75<br>80<br>85<br>90<br>95<br>100 | 9.672<br>8.490<br>7.571<br>6.835<br>6.234<br>5.732<br>5.308<br>4.944<br>4.629<br>4.353<br>4.110<br>3.894<br>3.700<br>3.526 |

| 9.24<br>SOLUBILITY IN WATER |   | 9.25<br>SATURATED VAPOR PRESSURE |   | 9.26<br>SATURATED VAPOR DENSITY |   | 9.27<br>IDEAL GAS HEAT CAPACITY  |   |
|-----------------------------|---|----------------------------------|---|---------------------------------|---|--|---|
| Temperature<br>(degrees F)  | Pounds per 100 pounds<br>of water   | Temperature<br>(degrees F)       | Pounds per square inch  | Temperature<br>(degrees F)      | Pounds per cubic foot   | Temperature<br>(degrees F)   | British thermal unit per<br>pound-F   |
|                             | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E |                                  | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E |                                 | C<br>U<br>R<br>R<br>E<br>N<br>T<br>L<br>Y<br><br>N<br>O<br>T<br><br>A<br>V<br>A<br>I<br>L<br>A<br>B<br>L<br>E | 0<br>25<br>50<br>75<br>100<br>125<br>150<br>175<br>200<br>225<br>250<br>275<br>300<br>325<br>350<br>375<br>400<br>425<br>450<br>475<br>500<br>525<br>550<br>575<br>600 | 0.234<br>0.245<br>0.255<br>0.266<br>0.277<br>0.287<br>0.298<br>0.309<br>0.320<br>0.330<br>0.341<br>0.352<br>0.362<br>0.373<br>0.384<br>0.395<br>0.405<br>0.416<br>0.427<br>0.437<br>0.448<br>0.459<br>0.470<br>0.480<br>0.491 |