

SODIUM ALUMINATE SOLUTION (45% OR LESS)

SAU

| CAUTIONARY RESPONSE INFORMATION | | | | 4. FIRE HAZARDS | 7. SHIPPING INFORMATION | | | | | | | | |
|---|----------------|--------------------|----------|--|--|--------------------|-------------------------------|---------------------------|-------------------------|---------------------------|---|---------------------------|---|
| Common Synonyms | Liquid | Colorless to amber | Odorless | <p>4.1 Flash Point: Not flammable.</p> <p>4.2 Flammable Limits in Air: Not pertinent.</p> <p>4.3 Fire Extinguishing Agents: Use extinguishing agents appropriate for the surrounding fire.</p> <p>4.4 Fire Extinguishing Agents Not to Be Used: Not pertinent.</p> <p>4.5 Special Hazards of Combustion Products: Not pertinent.</p> <p>4.6 Behavior in Fire: Containers may burst when exposed to heat.</p> <p>4.7 Auto Ignition Temperature: Not pertinent.</p> <p>4.8 Electrical Hazards: Not pertinent.</p> <p>4.9 Burning Rate: Not pertinent.</p> <p>4.10 Adiabatic Flame Temperature: Not pertinent.</p> <p>4.11 Stoichiometric Air to Fuel Ratio: Not pertinent.</p> <p>4.12 Flame Temperature: Not pertinent.</p> <p>4.13 Combustion Molar Ratio (Reactant to Product): Not pertinent.</p> <p>4.14 Minimum Oxygen Concentration for Combustion (MOCC): Not listed</p> | <p>7.1 Grades of Purity: Technical grades of varying concentrations.</p> <p>7.2 Storage Temperature: Ambient.</p> <p>7.3 Inert Atmosphere: No requirement.</p> <p>7.4 Venting: Open.</p> <p>7.5 IMO Pollution Category: D</p> <p>7.6 Ship Type: 3</p> <p>7.7 Barge Hull Type: 3</p> | | | | | | | | |
| <p>Wear full chemical protective clothing, gloves, goggles and Restrict access. Avoid contact with liquid and vapor. approved respirator. Notify local health and pollution control agencies. Protect water intakes.</p> | | | | <p>8. HAZARD CLASSIFICATIONS</p> <p>8.1 49 CFR Category: Corrosive material</p> <p>8.2 49 CFR Class: 8</p> <p>8.3 49 CFR Package Group: Currently not available.</p> <p>8.4 Marine Pollutant: No</p> <p>8.5 NFPA Hazard Classification:</p> <table> <thead> <tr> <th>Category</th> <th>Classification</th> </tr> </thead> <tbody> <tr> <td>Health Hazard (Blue).....</td> <td>3</td> </tr> <tr> <td>Flammability (Red).....</td> <td>0</td> </tr> <tr> <td>Instability (Yellow).....</td> <td>0</td> </tr> </tbody> </table> <p>8.6 EPA Reportable Quantity: Not listed.</p> <p>8.7 EPA Pollution Category: Not listed.</p> <p>8.8 RCRA Waste Number: Not listed</p> <p>8.9 EPA FWP/CA List: Not listed</p> | | Category | Classification | Health Hazard (Blue)..... | 3 | Flammability (Red)..... | 0 | Instability (Yellow)..... | 0 |
| Category | Classification | | | | | | | | | | | | |
| Health Hazard (Blue)..... | 3 | | | | | | | | | | | | |
| Flammability (Red)..... | 0 | | | | | | | | | | | | |
| Instability (Yellow)..... | 0 | | | | | | | | | | | | |
| <p>Fire</p> <p>Not flammable. Wear full protective clothing with self-contained breathing apparatus. Use extinguishing agents appropriate for the surrounding fire. Use water spray to cool exposed containers.</p> <p>Exposure</p> <p>CALL FOR MEDICAL AID.</p> <p>LIQUID 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, dilute by drinking water or milk. Do not induce vomiting. Neutralize with fruit juice.</p> <p>Water Pollution</p> <p>Effect of low concentrations on aquatic life is unknown. May be dangerous if it enters water intakes. Notify local health and wildlife officials. Notify operators of nearby water intakes.</p> | | | | <p>5. CHEMICAL REACTIVITY</p> <p>5.1 Reactivity with Water: No reaction.</p> <p>5.2 Reactivity with Common Materials: Not compatible with copper, tin, zinc, aluminum, acids, phosphorus, or chlorocarbons.</p> <p>5.3 Stability During Transport: Stable.</p> <p>5.4 Neutralizing Agents for Acids and Caustics: Weak acid.</p> <p>5.5 Polymerization: Will not polymerize.</p> <p>5.6 Inhibitor of Polymerization: Not pertinent.</p> <p>6. WATER POLLUTION</p> <p>6.1 Aquatic Toxicity: Currently not available</p> <p>6.2 Waterfowl Toxicity: Currently not available</p> <p>6.3 Biological Oxygen Demand (BOD): Currently not available</p> <p>6.4 Food Chain Concentration Potential: Currently not available</p> <p>6.5 GESAMP Hazard Profile:</p> <table> <tr> <td>Bioaccumulation: 0</td> </tr> <tr> <td>Damage to living resources: 1</td> </tr> <tr> <td>Human Oral hazard: 1</td> </tr> <tr> <td>Human Contact hazard: 1</td> </tr> <tr> <td>Reduction of amenities: 0</td> </tr> </table> | | Bioaccumulation: 0 | Damage to living resources: 1 | Human Oral hazard: 1 | Human Contact hazard: 1 | Reduction of amenities: 0 | | | |
| Bioaccumulation: 0 | | | | | | | | | | | | | |
| Damage to living resources: 1 | | | | | | | | | | | | | |
| Human Oral hazard: 1 | | | | | | | | | | | | | |
| Human Contact hazard: 1 | | | | | | | | | | | | | |
| Reduction of amenities: 0 | | | | | | | | | | | | | |
| <p>1. CORRECTIVE RESPONSE ACTIONS</p> <p>Stop discharge Dilute and disperse</p> <p>2. CHEMICAL DESIGNATIONS</p> <p>2.1 CG Compatibility Group: 5; Caustics</p> <p>2.2 Formula: NaAlO₂</p> <p>2.3 IMO/UN Designation: Currently not available</p> <p>2.4 DOT ID No.: 1819</p> <p>2.5 CAS Registry No.: 11138-49-1</p> <p>2.6 NAERG Guide No.: 154</p> <p>2.7 Standard Industrial Trade Classification: 52269</p> <p>3. HEALTH HAZARDS</p> <p>3.1 Personal Protective Equipment: Full, impervious chemical protective clothing and gloves, goggles, and approved respirator.</p> <p>3.2 Symptoms Following Exposure: Material is caustic. Irritates skin, eyes, and gastrointestinal tract, causing redness of skin and eyes, burning sensation of mucous membranes.</p> <p>3.3 Treatment of Exposure: Get medical attention. EYES: Flush with water for 15 min., lifting lids occasionally. SKIN: Remove contaminated clothing and shoes. Flush with water and neutralize with weak vinegar. INGESTION: Dilute by drinking water or milk. Neutralize by drinking fruit juice. Do not induce vomiting.</p> <p>3.4 TLV-TWA: Not listed.</p> <p>3.5 TLV-STEL: Not listed.</p> <p>3.6 TLV-Ceiling: Not listed.</p> <p>3.7 Toxicity by Ingestion: Currently not available</p> <p>3.8 Toxicity by Inhalation: Currently not available.</p> <p>3.9 Chronic Toxicity: Currently not available</p> <p>3.10 Vapor (Gas) Irritant Characteristics: Vapors are moderately irritating such that personnel will not usually tolerate moderate or high concentrations.</p> <p>3.11 Liquid or Solid Characteristics: Causes smarting of the skin and first-degree burns on short exposure; may cause second-degree burns on long exposure.</p> <p>3.12 Odor Threshold: Currently not available</p> <p>3.13 IDLH Value: Not listed.</p> <p>3.14 OSHA PEL-TWA: Not listed.</p> <p>3.15 OSHA PEL-STEL: Not listed.</p> <p>3.16 OSHA PEL-Ceiling: Not listed.</p> <p>3.17 EPA AEGL: Not listed</p> | | | | <p>9. PHYSICAL & CHEMICAL PROPERTIES</p> <p>9.1 Physical State at 15° C and 1 atm: Liquid.</p> <p>9.2 Molecular Weight: 81.97</p> <p>9.3 Boiling Point at 1 atm: 239°F = 115°C = 388°K</p> <p>9.4 Freezing Point: 32°F = 0°C = 273°K</p> <p>9.5 Critical Temperature: Currently not available</p> <p>9.6 Critical Pressure: Currently not available</p> <p>9.7 Specific Gravity: 1.55 @ 25°C.</p> <p>9.8 Liquid Surface Tension: Currently not available</p> <p>9.9 Liquid Water Interfacial Tension: Currently not available</p> <p>9.10 Vapor (Gas) Specific Gravity: Currently not available</p> <p>9.11 Ratio of Specific Heats of Vapor (Gas): Currently not available</p> <p>9.12 Latent Heat of Vaporization: Currently not available</p> <p>9.13 Heat of Combustion: Currently not available</p> <p>9.14 Heat of Decomposition: Currently not available</p> <p>9.15 Heat of Solution: Currently not available</p> <p>9.16 Heat of Polymerization: Not pertinent.</p> <p>9.17 Heat of Fusion: Currently not available</p> <p>9.18 Limiting Value: Currently not available</p> <p>9.19 Reid Vapor Pressure: Currently not available</p> | | | | | | | | | |
| NOTES | | | | | | | | | | | | | |

SODIUM ALUMINATE SOLUTION (45% OR LESS)

SAU

| 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 |
| 77 | 12.940 | | 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 |