SOUTHERN IONICS INCORPORATED **MSDS. NO. 118**
MATERIAL SAFETY DATA SHEET **Issue Date: August 11, 2004**
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PRODUCT NAME: **Sodium Bisulfite Solution, (28% - 38%)**

Transportation Emergencies, Call (800) 424-9300 (CHEMTREC)
Health Emergencies, contact Your Local Poison Center
Caution: Causes irritation. Avoid contact with skin, eyes or clothing.

I. PRODUCT INFORMATION

Product Name: Sodium Bisulfite Aqueous Solution, 30% **Formula:** See Below
Chemical Name: Sodium Bisulfite Aqueous Solution
CAS Number: 7631-90-5

Typical Composition	**CAS #'s**	**%**
Sodium Bisulfite ($NaHSO_3$)	7631-90-5	28 – 38
Sodium Sulfite (Na_2SO_3)	7757-83-7	<1
Sodium Sulfate (Na_2SO_4)	7757-82-6	<2
Water	7732-18-5	Balance

Exposure Standard: ACGIH TWA – 5 mg/m^3 for solid sodium bisulfite.

Hazard Ratings: Health = 3 Flammability = 0 Reactivity = 1
0 = Least; 1 = Slight; 2 = Moderate; 3 = High; 4 = Extreme;

II. PERSONAL PROTECTIVE EQUIPMENT REQUIREMENTS

Ventilation: Use local exhaust ventilation with a minimum capture velocity of 100 ft/min. (0.5 m/sec.) at the point of vapor evacuation. Refer to the current edition of Industrial Ventilation: A Manual of Recommended Practice published by the American Conference of Governmental Industrial Hygienists for information on the design, installation, use, and maintenance of exhaust systems.

Eye: Use chemical splash goggles and face shield (ANSI Z67.1 or approved equivalent). Eye protection worn must be compatible with respiratory protection system employed.

Skin: Chemically resistant gloves should be worn whenever this material is handled. Glove permeation data does not exist for this material. The following glove(s) should be used for splash protection only: - Neoprene Gloves should be removed and replaced immediately if there is any indication of degradation or chemical breakthrough. Rinse and remove gloves immediately after use. Wash hands with soap and water.

Respiratory: A respiratory protection program meeting OSHA 1910.134 ANSI Z88.2 requirements must be followed whenever work place conditions warrant a respirator's use.

For exposure exceeding TWA and up to 10 times the TWA, wear a MSHA/NIOSH approved (or equivalent) full-facepiece, air-purifying respirator.

For exposure in excess of 10 times the TWA and up to 100 times the TWA or Unknown, wear a MSHA/NIOSH approved (or equivalent) self-contained breathing apparatus in the positive pressure mode, or, MSHA/NIOSH approved (or equivalent) full-facepiece airline respirator in the positive pressure mode with emergency escape provisions.

Air-purifying respirators should be equipped with acid gas cartridges.

Other: Where splashing is possible, full chemically resistant protective clothing (e.g. acid suit) and boots are required.

III. HEALTH INFORMATION

PHYSIOLOGICAL & HEALTH EFFECTS

Routes of Entry:

Eyes: Direct contact with material can cause the following: severe irritation

Repeated contact at high concentrations can cause the following: corneal burning

Skin: Prolonged or repeated skin contact or when confined to skin can cause the following: irritation - dermatitis

Inhalation: Inhalation of vapor or mist can cause the following: irritation of nose, throat, and lungs – coughing – shortness of breath

Ingestion: Material is harmful if swallowed.

Material can cause the following: gastrointestinal irritation – allergic reaction

Material in large doses can cause the following: abdominal pain – control nervous system depression – diarrhea – depression - death

Toxicity: LD50 in rats 2000 mg/kg orally

EMERGENCY & FIRST AID PROCEDURES

Eyes: IMMEDIATELY flush eyes with a large amount of water for at least 15 minutes. Get prompt medical attention.

Skin: Remove contaminated clothing. Wash skin thoroughly with soap and water. Get prompt medical attention. Wash contaminated clothing thoroughly before reuse.

Inhalation: Move subject to fresh air. If breathing is difficult, give oxygen. Give artificial respiration if breathing has stopped. Call a physician.

Ingestion: Induce vomiting by giving 2 glasses of water to drink and touching back of subject's throat with finger. IMMEDIATELY see a physician. Never give anything by mouth to an unconscious person.

IV. REACTIVITY DATA

Stability: This material is considered stable.

Conditions To Avoid: Avoid exposure to excessive heat.

Incompatibility: Avoid contact with the following: acids – oxidizing agents

Hazardous Decomposition Products: Thermal decomposition may yield the following: sulfur dioxide – toxic fumes

Hazardous Polymerization: Product will not undergo hazardous polymerization.

V. PHYSICAL AND CHEMICAL PROPERTIES

Appearance and Odor: Clear to pale yellow liquid; pungent odor

Boiling Point: 103°C/217°F Estimated

Melting Point: No Data

Vapor Density (air = 1): > 1.0 Estimate

Vapor Pressure: 32 mm Hg Estimate

Solubility in water: Dilutable

Specific Gravity (H_2O =1): 1.17 to 1.31

pH: 3.5 to 4.5

Other (i.e. wt. per gallon): 10.0 to 11.0 lb/gal

VI. SPECIAL PRECAUTIONS

Handling and Storage Precautions: Avoid temperature extremes during storage; ambient temperature preferred. Do not store this material near food, animal feed or drinking water. Store in well ventilated area. Store away from excessive heat (e.g. steampipes, radiators), and from reactive materials. Keep container tightly closed when not in use.

The vapor above sodium bisulfite solution contains water vapor and sulfur dioxide. The concentration of sulfur dioxide varies with conditions, temperature and the pH of the SBS being the most important. Caution is recommended in determining how and where such vapors are handled and vented. The ACGIH TWA for sulfur dioxide is 2 ppm.

Do not handle material near food, animal feed or drinking water. This material is corrosive. See the PERSONAL PROTECTION MEASURES Section prior to handling. Vapors can be evolved when material is

heated during processing operations. See FACILITY CONTROL MEASURES Section for types of ventilation required. Slight positive pressure may develop upon long-term storage in air-tight containers. Carefully relieve any pressure build-up when opening container. Wash after handling and shower at end of work period.

CONTAINERS HAZARDOUS WHEN EMPTY. Since emptied containers retain product residue (vapors and/or liquid) follow all MSDS and label warnings even after container is emptied. Empty drums should be rinsed with water before discarding. Dispose empty container in a sanitary landfill or by incineration as allowed by state and local authorities. Avoid inhalation of smoke if incinerated.

VII. FIRE PROTECTION INFORMATION

Flash Point: Not applicable **Flammable Limits:** Not flammable

Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Special Firefighting Procedures: Move containers promptly out of fire zone. If removal is impossible, cool containers with water spray. Remain upwind. Avoid breathing noxious fumes (sulfur dioxide) from fire-exposed material.

VIII. TRANSPORTATION REQUIREMENTS

DOT Proper Shipping Name: Bisulfites, inorganic, aqueous solutions, n.o.s. (Sodium Bisulfite)

DOT Classification: 8

UN/NA Identification: Number: UN2693

Packing Group: III

Other Labels: Corrosive

IX. SPILL AND LEAK PROCEDURES

Precaution if Spilled or Released: Contain spills immediately with inert materials (i.e. sand, earth). Evacuate and ventilate spill area. Avoid all contact. Transfer liquids and solid diking material to separate suitable containers for recovery or disposal. CAUTION: Keep spills and cleaning runoff out of municipal sewers and open bodies of water.

Neutralizing Chemicals: Sodium Bisulfite may be neutralized with sodium hydroxide, or soda ash to neutral pH. Avoid acidic conditions (i.e. pH <5.0), since under acidic conditions, sulfur dioxide a poisonous gas can be released.

Waste Disposal Methods: For disposal, incinerate or landfill at a permitted facility in accordance with local, state, and federal regulations (see 40 CFR Part 268).

Reportable Quantities: 5,000 lbs on dry weight basis for sodium bisulfite.

SALES OFFICE

For Product Information:
TEL: 662-494-3055
FAX: 662-494-2828

Post Office Drawer 1217
West Point, MS 39773

To Place An Order:
TEL: 800-953-3585
FAX: 800-953-3588