PRODUCT AND COMPANY IDENTIFICATION

Product
Chemical Name: Sodium Bisulfite
Synonyms: Sodium Acid Sulfite; Sodium Hydrogen Sulfite
CAS Number: 7631-90-5
Chemical Family: Sulfite Reducing Agent
Formula: 40% NaHSO3
Issue Date: May 25, 2011

Company Identification
Supplier
ACCO Unlimited Corporation
5300 NW 55 Avenue
Johnston, IA 50131
(515) 278-0487

FOR CHEMICAL EMERGENCY, CALL CHEMTREC (24 HOURS): 1-800-424-9300

HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW: DANGER! CORROSIVE. May cause severe irritation or burns to the eyes, skin and respiratory tract. Harmful or fatal if swallowed. Harmful if inhaled. May cause an allergic reaction to skin, respiratory tract or if swallowed. May cause central nervous system depression.

Physical State: Liquid.
Color: Clear. Yellow.
Odor: Sulfur dioxide odor.

POTENTIAL HEALTH EFFECTS

Routes of Exposure: Eyes. Skin. Inhalation. Ingestion.


Eye Contact: May be corrosive to the eyes. Severe irritation and burns may result. Liquid or mist may cause: discomfort. Tearing, redness, pain, blurred vision. If left untreated, may cause: burns, corneal damage, blindness.

Skin Contact: May be corrosive to the skin. Severe irritation and burns may result. Contact may cause: discomfort, rash, redness, swelling, scaling, blistering, allergic reaction in some individuals. Effects may be delayed.

Skin Absorption: No data available.

Inhalation: May be corrosive to the respiratory tract. Severe irritation and burns may result. May irritate or damage: nose, throat, mucous membranes, respiratory tract. May cause: coughing, shortness of breath. Allergic reaction in some individuals. Effects may be delayed.

Ingestion: May be corrosive to the gastrointestinal tract. Severe irritation and burns may result. Large amounts may cause: nausea, stomach upset, vomiting, diarrhea, abdominal pain, central nervous system depression, violent colic, death. May cause an allergic reaction in some individuals. Effects may be delayed.

Medical Conditions Aggravated by Exposure to Product: Asthma. Lung disorders. Some individuals are said to be dangerously sensitive to minute amounts of sulfites in foods. Symptoms may include broncho constriction, shock, gastrointestinal disturbances, angio edema, flushing and tingling sensations. Once allergy develops, future exposures can cause asthma attacks with shortness of breath, wheezing and cough.

Other: May cause severe allergic reaction in some asthmatics and sulfite sensitive individuals. The potential for exposure to sulfur dioxide must always be considered as well, particularly when the solution may become overheated. SULFUR DIOXIDE GIVEN OFF BY THIS PRODUCT HAS BEEN SHOWN TO CAUSE BREATHING DIFFICULTIES IN ASTHMATICS.

Cancer Information: This product does not contain 0.1% or more of the known or potential carcinogens listed in NTP, IARC or OSHA.

Potential Environmental Effects: See Section 12.
SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>% by Wt.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Water</td>
<td>7732-18-5</td>
<td>60 %</td>
</tr>
<tr>
<td>Sodium Bisulfite</td>
<td>7631-90-5</td>
<td>40 %</td>
</tr>
</tbody>
</table>

SECTION 4: FIRST AID MEASURES

**Eye Contact:** Immediately flush eyes with plenty of water for at least 15 minutes while holding eyelids open. Tilt head to avoid contaminating unaffected eye. Get immediate medical attention.

**Skin Contact:** Immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical attention immediately. Do not reuse clothing and shoes until cleaned. Wipe off excess. Discard footwear which cannot be decontaminated.

**Inhalation:** Remove to fresh air. If breathing is difficult, administer oxygen. If not breathing, give artificial respiration, preferably mouth-to-mouth. GET MEDICAL ATTENTION IMMEDIATELY.

**Ingestion:** If swallowed, call a physician immediately. DO NOT induce vomiting unless directed to do so by a physician. Never give anything by mouth to an unconscious person. If vomiting occurs spontaneously, keep head below hips to prevent aspiration of liquid into the lungs. Give water or milk to dilute. If vomiting occurs spontaneously, keep airway clear and give more water.

**Note to Physicians:** The decision of whether to induce vomiting or not should be made by a physician.

SECTION 5: FIRE FIGHTING MEASURES

**Extinguishing Media:** For fires in area use appropriate media. For example: Water spray. Dry chemical. Carbon dioxide. Foam.

**Fire Fighting Methods:** Evacuate area of unprotected personnel. Wear protective clothing including NIOSH-Approved self-contained breathing apparatus. Remain upwind of fire to avoid hazardous vapors and decomposition products. Cool containers that are exposed to flame with streams of water until fire is out. Do not use solid water streams near ruptured tanks or spills. Neutralize run-off with lime, soda ash or other suitable neutralizing agents. Run-off from fire control may cause pollution.

**Fire and Explosion Hazards:** Toxic fumes, gases or vapors may evolve on burning.

**Hazardous Combustion Products:** Toxic vapors. Sulfur oxides. Sulfur dioxide. Sodium sulfide may be formed after dried solution residues are heated. This is an explosive hazard and strongly alkaline in contact with water.

SECTION 6: ACCIDENTAL RELEASE MEASURES

**Spill Clean-Up Procedures:** CORROSIVE MATERIAL. Evacuate unprotected personnel from area. Maintain adequate ventilation. Follow personal protective equipment recommendations found in Section 8. Never exceed any occupational exposure limit. Eliminate all sources of ignition. Shut off source of leak if safe to do so. Contain spill, place into drums for proper disposal. Neutralize with an alkali (sodium carbonate, lime, etc.) Sulfur dioxide and carbon dioxide may be released during neutralization. Flush remaining area with water to remove trace residue and dispose of properly. Avoid direct discharge to sewers and surface waters. Notify authorities if entry occurs.

SECTION 7: HANDLING AND STORAGE

**Handling:** Avoid contact with eyes, skin and clothing. Use with adequate ventilation. Do not swallow. Avoid breathing vapors, mists or dust. Do not eat, drink or smoke in work area. Wash thoroughly after handling. Empty containers retain product residues; observe all warnings and precautions listed for the product. Do not handle near an open flame, heat or other sources of ignition.

**Storage:** CORROSIVE MATERIAL. Store in a cool, well ventilated area, out of direct sunlight. Store in a dry location away from heat. Keep away from incompatible materials. Keep containers tightly closed. Do not store in unlabeled or mislabeled containers. Store away from all sources of heat and ignition to prevent decomposition and release of sulfur dioxide gas. Do not freeze. Store above 50°F to avoid crystallization. Protect containers against physical damage. Tanks should be vented into an alkaline fume recovery system or scrubber. Storage tanks should be protected from water ingress, and maintained structurally in a safe and reliable condition. Store in corrosion-resistant container.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

**OSHA Exposure Guidelines:** No components found.

**ACGIH Exposure Guidelines:**

<table>
<thead>
<tr>
<th>Component</th>
<th>Limits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bisulfite</td>
<td>5 mg/m3 TWA</td>
</tr>
</tbody>
</table>

**Note:** Sulfur Dioxide gas may be released. The Exposure Limits for Sulfur Dioxide are: 5 ppm-TWA (OSHA); 2 ppm-TWA, 5 ppm- STEL (ACGIH) (Vacated 1989 OSHA PELs).
CONTINUED SECTION 8: EXPOSURE CONTROLS/PERSOAL PROTECTION

**Engineering Controls:** Local exhaust ventilation, process enclosures or other engineering controls are imperative when handling or using this product to avoid overexposure. Maintain adequate ventilation. Do not use in closed or confined spaces. Avoid creating dust or mist. Keep levels below exposure limits. To determine exposure levels, monitoring should be performed regularly.

**Eye/Face Protection:** Wear chemical safety goggles and a full face shield while handling this product. Do not wear contact lenses.

**Skin Protection:** Prevent contact with this product. Wear gloves and protective clothing depending on condition of use. Protective gloves: Impervious. Neoprene. Rubber. Polyvinyl chloride.

**Respiratory Protection:** Respiratory protection must be worn when handling this product. If exposure limits are exceeded, wear: NIOSH-Approved respirator for dusts, mists and/or SO2 vapors as conditions indicate. NIOSH-Approved air-purifying respirator with: Acid gas cartridge. NIOSH-Approved self-contained breathing apparatus. NIOSH-Approved positive pressure supplied air respirator. DO NOT exceed limits established by the respirator manufacturer. All respiratory protection programs must comply with OSHA 29 CFR 1910.134 and ANSI Z88.2 requirements and must be followed whenever workplace conditions require a respirator's use.


**General Hygiene Conditions:** Wash with soap and water before meal times and at the end of each work shift. Good manufacturing practices require gross amounts of any chemical be removed from skin as soon as practical, especially before eating or smoking.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Color: Clear. Yellow.</td>
<td>pH: 4</td>
<td>Flash Point Method: N.A.</td>
</tr>
<tr>
<td>Odor: Sulfur dioxide odor.</td>
<td>Specific Gravity: 1.33 @ 25°C</td>
<td>Lower Explosion Limit: N.A.</td>
</tr>
<tr>
<td>Boiling Point (deg. F): ~ 220</td>
<td>% Volatile (wt%): N.D.</td>
<td>Upper Explosion Limit: N.A.</td>
</tr>
<tr>
<td>Freezing Point (deg. F): 45</td>
<td>Evaporation Rate (nBuAc = 1): N.D.</td>
<td>Autoignition Temperature: No Data</td>
</tr>
<tr>
<td>Melting Point (deg. F): N.D.</td>
<td>VOC (wt%): 0</td>
<td>Fire Point: N.D.</td>
</tr>
<tr>
<td>Vapor Pressure (mm Hg): ~9@20°C (SO2)</td>
<td>VOC (lbs/gal): 0</td>
<td></td>
</tr>
<tr>
<td>Vapor Density (air=1): N.D.</td>
<td>Viscosity: ~ 3 cP @ 30 C; ~ 4.5 cP @ 15.6 C</td>
<td></td>
</tr>
</tbody>
</table>

SECTION 10: STABILITY AND REACTIVITY

**Stability:** Stable under normal conditions.

**Conditions to Avoid:** Avoid contact with heat, sparks, electric arcs, other hot surfaces and open flames. Avoid other ignition sources. Temperatures at or near boiling point causes evolution of Sulfur dioxide. Avoid excess exposure to air. On exposure to air, the product will lose some Sulfur dioxide and gradually oxidize to sulfate.


**Hazardous Decomposition Products:** Sulfur dioxide gas. Sulfur oxides. Toxic vapors.

**Possibility of Hazardous Reactions:** Hazardous polymerization will not occur under normal conditions. Oxidizing agents may cause exothermic reactions. Both acidification and heating accelerate the release of Sulfur dioxide fumes.

SECTION 11: TOXICOLOGICAL INFORMATION

<table>
<thead>
<tr>
<th>Component</th>
<th>Oral LD50</th>
<th>Dermal LD50</th>
<th>Inhalation LC50</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bisulfite</td>
<td>Rat: 1420 mg/kg</td>
<td>No Data</td>
<td>No Data</td>
</tr>
</tbody>
</table>

This product has been shown to be positive in mutagenicity assays.

SECTION 12: ECOLOGICAL INFORMATION

**Ecotoxicological Information:** Sodium Bisulfite Solution: LC50 Mosquito Fish (96 hours): 240 ppm

**Chemical Fate Information:** Products of Biodegradation: Sulfur oxides (SO2, SO3). Some metallic oxides. The products of degradation are toxic.

SECTION 13: DISPOSAL CONSIDERATIONS

**Hazardous Waste Number:** N.A.

**Disposal Method:** Dispose of in accordance with all local, state and federal regulations. Regulations may vary in different locations. Waste characterizations and compliance with applicable laws are the responsibility solely of the waste generator. Since emptied containers retain product residue, follow label warnings even after container is emptied. The information offered here is for the product as shipped. Use and/or alteration to the product such as mixing with other materials may significantly change the characteristics of the material and alter the RCRA classification and the proper disposal method.
SECTION 14: TRANSPORT INFORMATION

DOT (Department of Transportation):

Identification Number: UN2693
Proper Shipping Name: Bisulfites, Aqueous Solutions, N.O.S. (Contains Sodium Bisulfite)
Hazard Class: 8
Packing Group: III
Label Required: CORROSIVE
Reportable Quantity (RQ): 5000# (Sodium Bisulfite)

SECTION 15: REGULATORY INFORMATION

TSCA Inventory Status: This product or all components of this product are listed on the EPA/TSCA Inventory of Chemical Substances.

SARA Title III Section 311/312 Category Hazards:

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS Number</th>
<th>CERCLA-RQ</th>
<th>SARA-EHS</th>
<th>SARA-313</th>
<th>U.S.-HAP</th>
<th>WI-HAP</th>
<th>Prop 65</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sodium Bisulfite</td>
<td>7631-90-5</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
<td>No</td>
<td>No</td>
</tr>
</tbody>
</table>

Clean Water Act: This product contains one or more components designated as hazardous substances or toxic pollutants pursuant to the Federal Clean Water Act (40 CFR 116.4 Table A; 40 CFR 401.15). Any unpermitted introduction of this product into a facility stormwater or wastewater discharge may constitute a violation of the Clean Water Act. Facilities must notify the appropriate permitting agency prior to introducing this product into the aforementioned discharges.

NSF/ANSI Standard 60 Maximum Use Level: 46 mg/L.

SECTION 16: OTHER INFORMATION

Hazard Rating System
Health: 2
Flammability: 0
Reactivity: 0
* = Chronic Health Hazard

NFPA Rating System
Health: 2
Flammability: 0
Reactivity: 0
Special Hazard: None

MSDS Abbreviations
N.A. = Not Applicable
N.D. = Not Determined
HAP = Hazardous Air Pollutant
VOC = Volatile Organic Compound
C = Ceiling Limit
N.E./Not Estab. = Not Established

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