

MSDS# 20995

Section 1 - Chemical Product and Company Identification

MSDS Name: Sodium bisulfate monohydrate  
Catalog Numbers: AC419430000, AC419430050, AC419435000, S240-3, S240-500  
Synonyms: Sodium hydrogen sulfate monohydrate.

Company Identification: Fisher Scientific  
One Reagent Lane  
Fair Lawn, NJ 07410

For information in the US, call: 201-796-7100  
Emergency Number US: 201-796-7100  
CHEMTREC Phone Number, US: 800-424-9300

Section 2 - Composition, Information on Ingredients

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Risk Phrases:

CAS#: 10034-88-5  
Chemical Name: Sodium bisulfate monohydrate  
%: 97+  
EINECS#: unlisted  
Hazard Symbols:

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Text for R-phrases: see Section 16

Hazard Symbols: XI



Risk Phrases: 41

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Danger! Hygroscopic (absorbs moisture from the air). Causes eye and skin burns. Causes digestive and respiratory tract burns. Corrosive to aluminum in aqueous solution. Target Organs: Respiratory system, gastrointestinal system, eyes, skin.

Potential Health Effects

Eye: Causes eye burns.  
Skin: Contact with skin causes irritation and possible burns, especially if the skin is wet or moist.  
Ingestion: May cause burns to the digestive tract.  
Inhalation: May cause severe irritation of the respiratory tract with sore throat, coughing, shortness of breath and delayed lung edema.  
Chronic: No information found.

Section 4 - First Aid Measures

Eyes: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Get medical aid immediately.

Skin: In case of contact, immediately flush skin with plenty of water for at least 15 minutes while removing contaminated clothing and shoes. Get medical aid immediately. Wash clothing before reuse.

Ingestion: If swallowed, do NOT induce vomiting. Get medical aid immediately. If victim is fully conscious, give a cupful of water. Never give anything by mouth to an unconscious person.

Inhalation: If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical aid.

Notes to Physician: Treat symptomatically and supportively.

### Section 5 - Fire Fighting Measures

General Information: As in any fire, wear a self-contained breathing apparatus in pressure-demand, MSHA/NIOSH (approved or equivalent), and full protective gear. Substance is noncombustible. Reacts with most metals in the presence of moisture, liberating extremely flammable hydrogen gas. Oxides of sulfur may be produced in fire.

Extinguishing Media: Use extinguishing media most appropriate for the surrounding fire.

Autoignition Temperature: Not available.

Flash Point: Not applicable.

Explosion Limits: Lower: Not available

Explosion Limits: Upper: Not available

NFPA Rating: health: 3; flammability: 0; instability: 0;

### Section 6 - Accidental Release Measures

General Information: Use proper personal protective equipment as indicated in Section 8.

Spills/Leaks: Vacuum or sweep up material and place into a suitable disposal container. Clean up spills immediately, observing precautions in the Protective Equipment section. Avoid generating dusty conditions. Provide ventilation. Remove ignition sources since flammable hydrogen gas may be generated by reaction of metal with aqueous solution of product.

### Section 7 - Handling and Storage

Handling: Wash thoroughly after handling. Remove contaminated clothing and wash before reuse. Do not get in eyes, on skin, or on clothing. Keep container tightly closed. Do not ingest or inhale. Use with adequate ventilation. Discard contaminated shoes.

Storage: Store in a cool, dry place. Keep container closed when not in use. Aqueous solutions cannot be stored in aluminum, carbon steel, copper, copper alloys, zinc or nickel containers.

### Section 8 - Exposure Controls, Personal Protection

| Chemical Name                | ACGIH       | NIOSH       | OSHA - Final PELs |
|------------------------------|-------------|-------------|-------------------|
| Sodium bisulfate anhydrous   | none listed | none listed | none listed       |
| Sodium bisulfate monohydrate | none listed | none listed | none listed       |

OSHA Vacated PELs: Sodium bisulfate anhydrous: None listed Sodium bisulfate monohydrate: None listed

Engineering Controls:

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower. Use adequate ventilation to keep airborne concentrations low.

Exposure Limits

Personal Protective Equipment

Eyes: Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

Skin: Wear appropriate protective gloves to prevent skin exposure.

Clothing: Wear appropriate protective clothing to prevent skin exposure.

Respirators: Follow the OSHA respirator regulations found in 29 CFR 1910.134 or European Standard EN 149. Use a NIOSH/MSHA or European Standard EN 149 approved respirator if exposure limits are exceeded or if

irritation or other symptoms are experienced.

### Section 9 - Physical and Chemical Properties

Physical State: Crystals

Color: colorless

Odor: odorless

pH: ~1 (50 g/l H<sub>2</sub>O @ 20°C)

Vapor Pressure: Not applicable.

Vapor Density: Not available

Evaporation Rate: Not applicable.

Viscosity: Not applicable.

Boiling Point: Decomposes.

Freezing/Melting Point: 183 deg C ( 361.40°F)

Decomposition Temperature:

Solubility in water: Soluble

Specific Gravity/Density: 2.12 g/cm<sup>3</sup>

Molecular Formula: NaHSO<sub>4</sub>.H<sub>2</sub>O

Molecular Weight: 138.08

### Section 10 - Stability and Reactivity

|  |   |
|--|---|
| Chemical Stability:                    | Stable under normal temperatures and pressures. Hygroscopic: absorbs moisture or water from the air.      |
| Conditions to Avoid:                   | Dust generation, excess heat, exposure to moist air or water, Corrosive to aluminum in aqueous solution.. |
| Incompatibilities with Other Materials | Metals, strong bases, alcohols.   |
| Hazardous Decomposition Products       | Oxides of sulfur.   |
| Hazardous Polymerization               | Will not occur.   |

### Section 11 - Toxicological Information

|                  |  |
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| RTECS#:          | CAS# 7681-38-1: VZ1860000<br>CAS# 10034-88-5: VZ1870000  |
| LD50/LC50:       | RTECS: Not available. RTECS: Not available.  |
| Carcinogenicity: | Sodium bisulfate anhydrous - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65.<br>Sodium bisulfate monohydrate - Not listed as a carcinogen by ACGIH, IARC, NTP, or CA Prop 65. |
| Other:           | See actual entry in RTECS for complete information.  |

### Section 12 - Ecological Information

Not available

### Section 13 - Disposal Considerations

Dispose of in a manner consistent with federal, state, and local regulations.

### Section 14 - Transport Information

US DOT

Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S.

Hazard Class: 8

UN Number: UN3260

Packing Group: III

Canada TDG

Shipping Name: Corrosive Solid, Acidic, Inorganic, N.O. (SODIUM BISULFATE MONOHYDRATE)

Hazard Class: 8

UN Number: UN3260

Packing Group: III

### Section 15 - Regulatory Information

## European/International Regulations

### European Labeling in Accordance with EC Directives

Hazard Symbols: XI

Risk Phrases:

R 41 Risk of serious damage to eyes.

Safety Phrases:

S 24 Avoid contact with skin.

S 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

### WGK (Water Danger/Protection)

CAS# 7681-38-1: 1

CAS# 10034-88-5: Not available

### Canada

CAS# 7681-38-1 is listed on Canada's DSL List

Canadian WHMIS Classifications: E

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all of the information required by those regulations.

CAS# 7681-38-1 is listed on Canada's Ingredient Disclosure List

CAS# 10034-88-5 is not listed on Canada's Ingredient Disclosure List.

### US Federal

#### TSCA

CAS# 7681-38-1 is listed on the TSCA Inventory.

CAS# 10034-88-5 is not on the TSCA Inventory because it is a hydrate. It is considered to be listed if the CAS number for the anhydrous form is on the Inventory (40CFR720.3(u)(2)).

#### Section 16 - Other Information

MSDS Creation Date: 9/30/1997

Revision #8 Date 7/20/2009

The information above is believed to be accurate and represents the best information currently available to us. However, we make no warranty of merchantability or any other warranty, express or implied, with respect to such information, and we assume no liability resulting from its use. Users should make their own investigations to determine the suitability of the information for their particular purposes. In no event shall the company be liable for any claims, losses, or damages of any third party or for lost profits or any special, indirect, incidental, consequential, or exemplary damages howsoever arising, even if the company has been advised of the possibility of such damages.

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