

**MATERIAL SAFETY DATA SHEET****NUMBER 003**

Solvay Minerals, Inc., Green River, WY.

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Issued by: P. J. Luzmoor, Safety/Training Dept.

HAZARDOUS MATERIAL INFORMATION SYSTEM(HMIS?) H = 2 F = 0 R = 1 PERSONAL PROTECTION = E

The following information is based upon our current knowledge and experience of our product and is not exhaustive. It applies to the product as defined by the specifications. In case of combinations of mixtures, one must confirm that no new hazards are likely to exist. In any case, the user is not exempt from observing all legal, administrative and regulatory procedures relating to the product, personal hygiene, and integrity of the work environment. (Unless noted to the contrary, the technical information applies only to pure product).

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**1. PRODUCT IDENTIFICATION**1.1 Product Name: **SODIUM SULFITE, ANHYDROUS**

1.2 Chemical Name: inorganic sodium compounds.

1.3 Synonyms: anhydrous sodium sulfite (technical grade)-(food grade)-(photographic grade)

1.4 Trade Names: sodium sulfite.

1.5 Formula:  $\text{Na}_2\text{SO}_3$ 

1.6 Molecular Weight: 126.04

1.7 CAS No.: 7757-83-7

1.8 EINECS #: 231-821-4

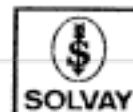
**2. COMPOSITION/INFORMATION ON INGREDIENTS**

INGREDIENTS/FORMULA	CAS #	UN #	PERCENT
<i>Sodium Sulfite</i> - $\text{Na}_2\text{SO}_3$	7757-83-7	NA	99%
<i>Sodium Sulfate</i> - $\text{Na}_2\text{SO}_4$	7757-82-6	NA	1%

**3. HAZARD IDENTIFICATION**

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- 3.1 Sodium Sulfite is an odorless, free flowing white crystal.
- 3.2 **Route(s) of Entry:** *Inhalation-Yes Skin-Yes Ingestion-Yes*
- 3.3 **Effects of exposure:** May cause mild irritation.  
*Inhalation (dust):* May cause irritation. Sulfite-sensitive individuals may experience a severe allergic reaction.  
*Eyes (dust):* May cause mild irritation.  
*Skin:* May cause mild irritation.  
*Ingestion:* Oral exposure or swallowing may produce gastrointestinal upset, nausea or vomiting. Ingestion may be fatal. Sulfite sensitive individuals may experience a severe allergic reaction.

#### 4. FIRST AID MEASURES

- 4.1 ***Inhalation:*** Remove the patient to fresh air. If breathing has stopped or patient experiences difficulty in breathing, administer artificial respiration.  
***Eyes:*** Remove contact lenses. Gently flush the eyes and surrounding areas with lukewarm water for 15 minutes. If irritation persists, seek medical attention.  
***Skin:*** Remove contaminated clothing. Wipe material from the skin. Rinse the affected area with large amounts of water for 15 minutes. If irritation persists, seek medical attention.  
***Ingestion:*** Do not attempt to give anything by mouth to an unconscious person. Remove any evidence of the substance from the patient's mouth. If the patient is conscious and alert, give 8-12 ounces of water and seek medical attention.
- 4.2 **Medical Conditions Aggravated by Exposure:** Breathing of dust may aggravate asthma or other pulmonary diseases.

#### 5. FIRE FIGHTING MEASURES

- 5.1 **Flash Point:** Non combustible.
- 5.2 **Auto-ignition Temperature:** Not applicable.
- 5.3 **Flammability Limits:** *Lower & Upper Limit:* Non flammable.
- 5.4 **Unusual Fire and Explosion Hazards:** Non-combustible. Generates hazardous SO<sub>2</sub> during decomposition.
- 5.5 **Common Extinguishing Methods:** Not applicable.
- 5.6 **Fire Fighting Procedures:** Wear NIOSH-approved self-contained breathing apparatus. Use water spray to keep containers cool and to knock down fumes.

#### 6. ACCIDENTAL RELEASE MEASURES

- 6.1 **Spills:** Shovel back into the original dry, uncontaminated container or waste receptacle. Flush area with water; contain runoff, dispose of waste in accordance with applicable federal, state, and local environmental laws and regulations.

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## 7. HANDLING AND STORAGE

- 7.1 **Handling:** Avoid prolonged or repeated contact with the skin or eyes. Do not wear contact lenses without proper eye protection when using this product. Wash exposed areas promptly and thoroughly after skin contact from working with this product and before eating, drinking, using tobacco products or using the rest room. Avoid prolonged or repeated breathing of dusts. Use vacuum or wet mop to clean up dust.
- 7.2 **Storage:** Keep in a closed, properly labeled container in a dry area away from acids. Protect from physical damage.
- 7.3 **For all operations:** DO NOT TAKE INTERNALLY.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

- 8.1 **Exposure Limits:** OSHA Permissible Exposure Limit (PEL) Nuisance Dust-5 mg/m<sup>3</sup> (Respirable Fraction), 15 mg/m<sup>3</sup> (Total Dust). Exposure limits for sulfur dioxide (SO<sub>2</sub>) is TWA = 2 ppm, STEL = 5 ppm.
- 8.2 **Ventilation:** In places with the possibility for creating dust, in excess of exposure limits, ventilation should be provided.
- 8.3 **Respiratory Protection:** In case of significant or accidental dust emissions, a NIOSH/MSHA approved respirator should be worn. If SO<sub>2</sub> is present, (see section 10), use an NIOSH-approved air supplied positive pressure respirator or acid gas canister.
- 8.4 **Protective Gloves:** Cotton gloves are adequate for routine handling of dry product. For solutions, wear impervious gloves.
- 8.5 **Eye Protection:** Wear chemical safety goggles. Do not wear contact lenses without proper eye protection.
- 8.6 **Other Protective Clothing or Equipment:** Wear boots, apron, long sleeves and other protective clothing suitable for use conditions to prevent contact with the skin. An eyewash and safety shower should be nearby and ready for use. Use good hygiene practices when handling this product including changing work clothes after use. Do not eat, drink or smoke in areas where this material is handled.
- 8.7 **Other:** Persons with allergic symptoms should seek advice from medical personnel as to whether exposure to the substance should be curtailed or eliminated.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

- 9.1 **Melting Point:** Decomposes at approximately 600°C (1112°F).
- 9.2 **Boiling Point:** Not applicable.
- 9.3 **Specific Gravity (H<sub>2</sub>O=1):** 2.63 @ 20°C (68°F).
- 9.4 **Vapor Density (air=1):** Not applicable.
- 9.5 **Vapor Pressure:** Not listed.

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- 9.6 **Solubility:** 27 g Sodium Sulfite in 100 g water @ 20°C (68°F)
- 9.7 **Decomposition Temperature:** Approximately 600°C (1112°F).
- 9.8 **Viscosity:** Not listed.
- 9.9 **pH:** 9.6-9.8 (1% solution).
- 9.10 **Other information:** Bulk Density: 85-95 lbs/ft<sup>3</sup>.

## 10. STABILITY AND REACTIVITY

- 10.1 **Stability:** Stable at ambient temperatures and atmospheric pressure.
- 10.2 **Hazardous Decomposition Products:** Oxides of sulfur. SO<sub>2</sub>.
- 10.3 **Conditions to Avoid:** High temperatures. Moisture.
- 10.4 **Materials and Substances to Avoid:** Contact with strong oxidizers cause vigorous exothermic reactions. Contact with acids will release SO<sub>2</sub>.

## 11. TOXICOLOGICAL INFORMATION

- 11.1 **Acute toxicity:** LD<sub>50</sub>-oral 820 mg/kg species: mouse
- 11.2 **Chronic toxicity:** Can cause allergic reactions (headaches, difficulty in breathing, rapid heart rate and anaphylaxis) to susceptible individuals after repeated contact.

## 12. ECOLOGICAL INFORMATION

- 12.1 **Aquatic Toxicity:** 96 hour LC<sub>50</sub>, goldfish: 100 mg/l. 24, 48, 96 hour TLm, mosquito fish: 2,600 ppm. BOD (Biological Oxygen Demand) = 0.12 LB/LB instantaneous. Sodium sulfite is an oxygen scavenger when introduced to water.

## 13. DISPOSAL CONSIDERATIONS

- 13.1 **Waste treatment:** Sodium Sulfite is not a listed hazardous waste under 40 CFR 261. However, state and local regulations for waste disposal may be more restrictive. Do not dump waste material into sewers, on the ground or into any body of water. It is recommended that Sodium Sulfite be landfilled after securing federal regulatory and local landfill operations approval.
- 13.2 **RCRA waste #:** Not listed.

## 14. TRANSPORT INFORMATION

- 14.1 **UN #:** Not listed. **NA #:** Not listed.
- 14.2 **STCC #:** 28-123-58.
- 14.3 **ERG Guide Book Number:** 111
- 14.3 **DOT guide # & Hazard class:** Not listed.

## 15. REGULATORY INFORMATION

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- 15.1 **NFPA:** *Health- not listed Flammability- not listed Reactivity- not listed Special- not listed*  
**HMIS:** *Health-2 Fire-0 Reactivity-1 Personal Protection-E-*  
**WHMIS:** CLASS D-2
- 15.2 **Regulatory/Carcinogenicity Status:** NTP & OSHA: None (1987) IARC: None (1990)
- 15.3 **CERCLA RQ & SARA Listing:** Not listed.
- 15.4 **Canadian DSL Registration:** Yes
- 15.5 **TSCA inventory:** Yes.

## 16. OTHER INFORMATION

The National Sanitation Foundation (NSF) recommends that the maximum usage level is 22 mg/l for potable water treatment, unless usage is ozone reduction. To reduce ozone, this product may be used at a stoichiometric ratio of 1 to 1, or a ratio of 215 mg/l of sodium sulfite to 100 mg/l of ozone. Residual sodium sulfite levels shall not exceed 100 ppb in the finished water.

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