

## SDS AMCO103

### Section 1 Identification

Product: AMCO 103

Other Means of Identification: Clear, colorless to light yellow liquid with a pungent sulfur dioxide odor.

Recommended Use and Restrictions on Use: Boiler water oxygen scavenger; chlorine reduction agent. Do not use in treatment of drinking water. Do not use in confined space. Avoid contact with acid or other use where generation of sulfur dioxide gas occurs.

Source: AMCO Inc..

P.O.Box 754

Chagrin Falls, OH 44022

Emergency Phone: Chemtrec (800) 424-9300

Office Phone: (440) 247-7533

### Section 2 Hazard(s) Identification

Emergency Overview: Clear, colorless to light yellow liquid with a pungent sulfur dioxide odor. Contact causes serious eye damage and skin irritation. Exposure to sulfur dioxide in head space gas may result in respiratory distress for sulfite sensitive individuals or asthmatics. Contact between product and acid will generate sulfur dioxide gas.

Classification 29CFR1910.1200: Product is hazardous by OSHA criteria.

Serious damage to eyes category 1

Skin irritant category 2

Acute toxicity, inhalation category 3 (sulfur dioxide off gas)

STOT-SE respiratory system (sulfur dioxide off gas) category 1

Corrosive to metal category 1

STOT-SE refers to specific target organ toxicity – single exposure

Signal Word: **DANGER**

Hazard Statements: Causes serious eye damage.

Causes skin irritation.

Toxic if inhaled (sulfur dioxide gas).

Causes damage to the respiratory system if inhaled (sulfur dioxide off gas).

Pictograms(s):

Serious eye damage



STOT-SE



Inhalation toxicity



Precautionary Statements: Do not get in eyes, on skin, or on clothing.

Wear eye protection and protective industrial rubber gloves.

Do not breathe dusts or mists or head space gas.

Keep only in original container.

Absorb spillage to prevent material damage.

If on skin: Wash with plenty of water.

If skin irritation or rash occurs: Get medical attention.

Wash contaminated clothing before reuse.

No specific treatment identified.

If in eyes: Rinse with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Immediately, call a doctor.

If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a Poison control center or doctor.

Store in corrosive resistant container or a container with a corrosion resistant inner liner.

Store in a well-ventilated place. Keep container tightly closed.

Store locked up.

Dispose of contents or container in accordance with local, state and federal regulations.

Hazards not Otherwise Classified: Contact with acids liberates toxic gases. Contact with acid may generate sufficient sulfur dioxide gas in a confined space to create an asphyxiation hazard. Ingestion of product may result in anaphylactic shock for sulfite sensitive individuals.

Ingredients with Unknown Toxicity: None

Potential Environmental Effects: Significant contamination of surface water may temporarily depress oxygen levels below minimum requirements for aquatic organisms.

### Section 3 Composition / Information on Ingredients

Hazardous Ingredients	CAS#	% by Wt.
Sodium bisulfite	7631-90-5	25 – 35

The exact percent by weight of the ingredient(s) in this formulation is proprietary

### Section 4 First-Aid Measures

Eyes: If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for 15 minutes. Immediately, call a doctor.

Skin: If on skin : Wash with plenty of water. If skin irritation or rash occurs: get medical attention. Take off contaminated clothing and wash it before reuse. No specific treatment identified.

Inhalation: If inhaled: Remove person to fresh air and keep comfortable for breathing. Call a poison control center or doctor.

Ingestion: If swallowed: Rinse mouth. Do NOT induce vomiting. Immediately, call a poison control center or doctor.

Acute Symptoms: May cause severe irritation or burns to eyes. May cause respiratory irritation, dyspnea (shortness of breath), and coughing if head space gas (sulfur dioxide) is inhaled. May cause gastrointestinal irritation, nausea, and - in sulfite sensitive individuals – severe allergy reactions, if ingested.

Delayed Effects: None known.

Immediate or Special Treatment requirements: no additional treatment indicated.

## Section 5 Fire Fighting Measures\

Suitable Extinguishing Media: Product is not flammable. Use media appropriate for surrounding fire.

Specific Hazards: Containers can rupture and release toxic vapors or decomposition products if exposed to heat. Under fire conditions, firefighters should expect the presence of clear, colorless sulfur dioxide gas (toxic, significant respiratory and eye irritant) and possibly other oxides of sulfur especially at floor level. Sodium bisulfite is a strong reducing agent. If sodium bisulfite is accidentally mixed with oxidizers like potassium chlorate, potassium nitrate, or potassium nitrite, there may be an explosion hazard during a fire.

Special PPE & Precautions: Wear self-contained breathing apparatus and full turn-out gear. Approach fire from upwind direction. If possible, move containers away from fire. Cool fire exposed containers with water spray. If containers rupture or leak, product may evolve irritating or toxic gas under extreme heat

## Section 6 Accidental Release Measures

Personal Precautions, PPE, & Emergency Procedures: Wear chemical splash goggles and protective industrial rubber gloves. When conditions warrant use, add face shield, apron, and/or rubber boots. If spill escapes to sanitary sewer, notify local public works authorities. If spill escapes to the environment, notify state and federal EPA and, if appropriate, the Coast Guard.

Containment & Clean-Up: Contain and collect spills with commercial absorbents. The CERCLA reportable quantity (RQ) for sodium bisulfite is 5,000 lbs. Consult local authorities for appropriate waste disposal options on your location.

## Section 7 Handling and Storage

Precautions for safe Handling: Open container slowly until pressure is relieved. Avoid spillage. Clean up small spills and drips promptly. Protect product from contamination. Avoid contact between this product and other chemicals. The recommended disposal for rinse waters from empty units is discharge to the treated system.

Conditions for Safe Storage: Store product in closed container in well ventilated, secure area. Protect containers against physical damage. Protect label. Empty containers retain product residues and all label hazards are still present until container is thoroughly cleaned. Avoid contact between this product and other chemicals, especially acids and oxidizers.

## Section 8 Exposure Controls / Personal Protection

Exposure limits for the formulated product are not established. Exposure limits for hazardous ingredient(s) and the sulfur dioxide present in head space gas:

Ingredient	Source & Parameter	Exposure Limit
Sodium bisulfite	ACGIH / TWA	5mg/m <sup>3</sup>
	ACGIH STEL	0.25 ppm
	OSHA PEL	13 mg/m <sup>3</sup>
	NIOSH REL	5 mg/m <sup>3</sup>
	NIOSH IDLH	100 ppm

Note: OSHA – Occupational Safety and Health Administration; ACGIH – American Conference of Governmental Industrial Hygienists; NIOSH – National Institute for Occupational Safety and Health; PEL – Permissible Exposure Limit; TWA – Time Weighted Average; TLV – Threshold Limit Value; REL – Recommended Exposure Limit; STEL – Short Term Exposure Limit; IDLH – Immediately Dangerous to Life or Health.

Engineering Controls: General exhaust ventilation is adequate. Employ work practices and product transfer practices that avoid spills, drips, or contact with any incompatible material.

Individual Protection / PPE: Wear chemical splash goggles and protective industrial rubber gloves.

## Section 9 Physical and Chemical Properties

Appearance (physical state, color, etc.):	Clear, colorless to light yellow liquid
Odor:	Pungent sulfur dioxide odor.
Odor threshold:	1-5 ppm, sulfur dioxide
pH:	~4.0
Melting point / freezing point	< 32 F
Initial boiling point and boiling range	> 212 F
Flash point	None, not flammable
Evaporation rate	Similar to water
Flammability (solid, gas):	Not flammable
Upper/lower flammability or explosive limits:	None, not flammable
Vapor pressure:	Not known, similar to water

Vapor density	>2, air=1, sulfur dioxide
Relative density	Specific gravity, 1.2 – 1.3
Solubility(ies):	Completely miscible in water
Partition coefficient: n-octanol/water	Not known
Auto-ignition temperature:	None, not flammable
Decomposition temperature	Not known, > 212 F
Viscosity	Not known

## Section 10 Stability and Reactivity

Reactivity: Product will react with oxidizers. Product will evolve sulfur dioxide gas if contact with acid occurs.

Chemical Stability: Stable at ambient temperatures and pressures.

Possibility of Hazardous Reactions: Product will evolve sulfur dioxide gas if contact with acid occurs. Polymerization will not occur.

Conditions to avoid: Contact with oxidizers or acid. Avoid elevated temperature. Keep container closed.

Incompatible Materials: Oxidizers and acids. May be corrosive to metals.

Hazardous Decomposition Products: Sulfur dioxide and other oxides of sulfur.

## Section 11 Toxicological Information

Likely Routes of Exposure: Eye or skin contact. Inhalation of head space gas.

Symptoms Related to Physical, Chemical, and Toxicological Characteristics: Product may cause severe irritation or burns to eyes. Inhalation of container head space gas (sulfur dioxide) will irritate the upper respiratory system and may cause dyspnea (shortness of breath) and coughing. Contact may irritate skin. May cause gastrointestinal irritation, nausea, and – in sulfite sensitive individuals – severe allergy reactions, if ingested.

Delayed Effects: None known.

Immediate Effects: Burns to eyes. Irritation to upper respiratory tract and/or eyes.

Skin irritation. Gastrointestinal irritation and nausea if ingested. Anaphylactic shock possible following ingestion by sulfite sensitive individuals.

Chronic Effects: None known.

Numerical Measures of Toxicity: No toxicology available on the formulated product.

Toxicology data for product ingredients:

Sodium bisulfite Oral rat LD50, 2,000 mg/kg

Sulfur dioxide Inhalation rat LC50, 2500 ppm I hour.

For a formulation raw material sulfite

Sodium metabisulfite Oral rat LD50, 1,540 mg/kg

Carcinogenicity: None of the products are listed as carcinogens by IARC, NTP, or OSHA.

## Section 12 Ecological Information

Ecotoxicity: Significant contamination of surface water may temporarily depress oxygen levels below minimum requirements for aquatic organisms.

Persistence and Degradability: Sodium bisulfite in aqueous solution oxidizes to less toxic sulfate.

Bioaccumulative Potential: Product ingredients do not bioaccumulate.

Mobility in Soil: Not known.

Other Adverse Effects: None known.

## Section 13 Disposal Considerations

Product is consumed during recommended use. Flush container residues to the treated system. If product is not consumed in use, material is not a RCRA hazardous waste.

Dispose of contents or container in accordance with local, state, and federal regulations.

## Section 14 Transport Information

UN Number: UN 2693

UN Proper Shipping Name: Bisulfites, aqueous solutions, nos, (sodium bisulfite)

Transport Hazard class(es) 8

Packing Group: PG III

Environmental Hazards: Does not contain ingredient(s) listed as a marine pollutant.

Transport in Bulk: Product container meets or exceeds DOT requirements. Product is shipped to end user. Material is a Packing Group III corrosive liquid. No extraordinary measures are required for shipment in bulk tanks including totes. See 49 CFR 172.101 & 49 CFR 172.102.

Special precautions: See Column 7 entries in the current DOT hazardous materials table.

## Section 15 Regulatory Information

US EPA EPCRA SARA Section 312: Immediate hazard, respiratory irritant, serious Eye damage, skin irritant.

US EPA EPCRA SARA Section 313: Not listed.

US EPA CERCLA: Sodium bisulfite is listed and has a CERCLA RQ of 5,000 lbs.

US EPA TSCA: All ingredients listed or exempt

## Section 16 Other information

### NFPA Hazard Ranking

Health – 3, Fire – 0, Reactivity – 0, Special – None

### HMIS Hazard Ranking

Health – 3, Fire – 0, Reactivity- 0, PPE – n & p or x (defined below)

n – splash goggles

p – gloves

x – consult supervisor

**Date of Preparation: Oct 13, 2014**

The information contained herein is believed to be accurate and reliable and is furnished without warranty of any kind. Users should consider these data only as a supplement to other information gathered by them and must make independent determinations of the suitability and completeness of information from all sources to assure proper use and disposal of these materials and the health of employees and customers.