



# MATERIAL SAFETY DATA SHEET

Product Name **Sodium bromate**  
Product id 8505  
Revision date 04/06/2007 **Revision: 5**  
Supersedes 21/03/2004

## 1. Identification of the substance & the company

Chemical name Sodium bromate  
Chemical formula NaBrO<sub>3</sub>  
Molecular weight 150.89  
Type of product and use A powerful oxidizing agent used in hair-care products and in textile dyeing, in organic synthesis and boiler cleaning.  
Supplier Ameribrom, INC.  
95 MacCorkle Ave. SW, South Charleston, WV 25303-1411, USA  
Tel: (304) 720-3950  
Fax: (304) 746-3101  
Emergency Telephone Chemtrec (800)424-9300

## 2. Composition / information on ingredients

Components CAS	Weight %	ACGIH-TLV Data	OSHA (PEL) Data
Bromate de sodium 7789-38-0	99.7	Not determined	Not determined

## 3. Hazards identification

Emergency overview *Off white crystalline powder, odourless  
Strong oxidizing agent  
Contact with other material may cause fire  
May cause skin and eye irritation Harmful if swallowed.*

### Potential Health Effects:

- Eye Contact Irritant
- Skin contact Not irritant to intact skin. Exposure to wet skin causes irritation.
- Inhalation Irritant to upper respiratory tract.  
Difficulty breathing may occur.  
Absorption from the lungs may cause symptoms similar to those of ingestion.



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**- Ingestion**                      The main symptoms of the acute phase of NaBrO<sub>3</sub> poisoning are vomiting, diarrhea and abdominal pain. Subsequently, headache, dizziness, shock symptoms, deafness, unconsciousness and convulsions are possible. NaBrO<sub>3</sub> is a nephrotoxin and an ototoxin. Cardiotoxicity and hepatotoxicity have also been reported. Methemoglobinemia may also occur.

## 4. First-aid measures

**Eye contact**                      Holding the eyelids apart, flush eyes promptly with copious flowing water for at least 20 minutes. Get medical attention immediately.

**Skin contact**                      Remove contaminated clothing. Wash skin thoroughly with mild soap and plenty of water for at least 15 minutes. Wash clothing before re-use. Get medical attention immediately.

**Inhalation**                        In case of dust inhalation or breathing fumes released from heated material, remove person to fresh air. Keep him quiet and warm. Apply artificial respiration if necessary and get medical attention immediately.

**Ingestion**                        If swallowed, wash mouth thoroughly with plenty of water and give water to drink. Get medical attention immediately.

\*\*\*\*\*  
NOTE: Never give an unconscious person anything to drink.  
\*\*\*\*\*

**Notes to the physician**                      Irritant  
In case of ingestion induce vomiting in alert patient.  
No specific antidote. Treat symptomatically and supportively.

## 5. Fire - fighting measures

**Flash point**                        None

**Flammable/Explosion limits**                      Not available

**Auto-ignition temperature**                      Not self-ignitable

**Suitable extinguishing media**                      Water is the most effective extinguishing agent. It should be sprayed on because a jet may throw the powder about.



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**Fire fighting procedure** Move containers from fire area if possible to do so without risk. Cool containers with water spray. Fire fighters should wear full protective clothing and self-contained breathing apparatus (SCBA) in positive pressure mode

**Unusual fire and explosion hazards** Strong oxidizing agent.  
Non-combustible but when involved in a fire it liberates oxygen which increases the rate of burning of the combustible materials involved and can cause explosion. Intimate mixtures with powdered materials such as metal powders, sulphur, or carbon may ignite spontaneously or when subjected to friction and burn with explosive violence. Containers may explode when involved in a fire. Will decompose from ca. 420°C releasing poisonous and corrosive fumes of bromine.

## 6. Accidental release measures

**Personal precautions** Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.

**Methods for cleaning up** Keep combustibles away from spilled material.  
With clean shovel place material into clean, dry container and cover.  
Move containers from spill area and keep for waste disposal.  
After material pickup is complete, flush remainder with sodium bisulfite solution followed by large amounts of water and ventilate area.

## 7. Handling and storage

**Handling** Keep containers tightly closed. Avoid producing or diffusing dust into the air. Avoid bodily contact.

**Storage** Store in a dry, cool, well-ventilated area away from incompatible materials (see "materials to avoid"). For safe storage refer to NFPA Bulletin 430 on storage of liquid and solid oxidizing materials.

## 8. Exposure controls / personal protection

**Manufacturer's recommendation** 5 mg/m<sup>3</sup> (TWA)

**Ventilation requirements** Ventilation must be sufficient to maintain atmospheric concentration below exposure limit.

**Personal protective equipment:**  
**- Respiratory protection** Dust respirator

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- <b>Hand protection</b>	Protective gloves
- <b>Eye protection</b>	Chemical safety goggles
- <b>Skin and body protection</b>	Body covering clothes and boots

**Hygiene measures** Safety shower and eye bath should be provided.  
Do not eat, smoke or drink where material is handled, processed or stored. Wash hands carefully before eating or smoking.

### 9. Physical and chemical properties

<b>Appearance</b>	Off white crystalline powder, odourless
<b>Melting point/range</b>	381°C (decomposes)
<b>Boiling point/range</b>	Not applicable under standard conditions
<b>Vapour pressure</b>	Not applicable under standard conditions
<b>Vapor density</b>	Not applicable under standard conditions
<b>Evaporation rate (ether=1)</b>	Not applicable under standard conditions
<b>Solubility:</b>	
- <b>Solubility in water</b>	37.4 g/100ml at 25°C 27.5 gr/100ml at 0°C
- <b>Solubility in other solvents</b>	Insoluble in alcohol and ether
<b>Specific gravity</b>	3.34
<b>Decomposition temperature</b>	~ 420°C

### 10. Stability and reactivity

<b>Stability</b>	Stable under normal conditions
<b>Materials to avoid</b>	Organic substances such as textiles, oil, wood, sugar and sawdust. Organic peroxides. Powdered materials such as metal powders, sulphur or carbon. Acids and strong reducing agents. Ammonium compounds
<b>Conditions to avoid</b>	Keep away from heat, sparks and open flame Avoid contact with combustibles.
<b>Hazardous decomposition products</b>	Bromine
<b>Hazardous polymerization</b>	Will not occur



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## 11. Toxicological information

**Acute toxicity:**

- Rat oral LD50 301 mg/kg
- Rabbit dermal LD50 > 2000 mg/kg

**Chronic toxicity** No information available

**Mutagenicity** Not mutagenic by the Ames Test

**Carcinogenicity** Not classified by IARC  
Not classified as a carcinogen by USA OSHA  
Not included in NTP 11th Report on Carcinogens

## 12. Ecological information

**Information on ecological effects** No information available

## 13. Disposal considerations

**Waste disposal** Add material to a large amount of water. Slowly add sodium bisulfite. Acidify if reaction does not proceed spontaneously. Bromine will be liberated during the reaction, which is complete when no bromine remains. Neutralize and dispose of by flushing down the drain with large quantities of water. Observe all federal, state and local environmental regulations when disposing of this material.

## 14. Transportation information

**UN No.** 1494

**DOT** Proper shipping name: SODIUM BROMATE  
Class: 5.1 - Oxidizing substances  
Label: OXIDIZER (5.1)  
Packing Group: II  
Emergency Guide No.140

**IMO** Proper shipping name: SODIUM BROMATE  
Class: 5.1 - Oxidizing substances  
Label: OXIDIZING AGENT (5.1)  
Packing Group: II



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<b>ICAO/IATA</b>	Proper shipping name: SODIUM BROMATE Class: 5.1 Label: OXIDIZING AGENT (5.1) Packing group: II
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### 15. Regulatory information

<b>USA</b>	Reported in the EPA TSCA Inventory
<b>- SARA 313</b>	This product does not contain a chemical listed at or above de minimis concentrations.
<b>- New Jersey right-to-know list</b>	Listed
<b>- California-Prop 65</b>	Chemicals known to the state of California to cause cancer or reproductive Toxicity: CAS RN: 7789-38-0 Name: Sodium bromate - Not listed CAS RN: 15541-45-4 Name: Bromate - Listed
<b>Canada</b>	Listed in DSL
<b>- WHMIS hazard class</b>	C oxidizing materials D1B toxic materials D2B toxic materials
<b>EEC No.</b>	232-160-4
<b>Japanese METI</b>	ENCS:1-115
<b>Australia</b>	Listed in AICS
<b>New Zealand Inventory</b>	Listed in NZIoC
<b>China inventory</b>	Listed
<b>Hong Kong</b>	Dangerous Goods- Category 7- Strong Supporters of Combustion
<b>Korea</b>	Listed in ECL (KE-31367)
<b>Philippines</b>	Listed in PICCS
<b>Switzerland</b>	Listed in Giftliste 1 (G-2577)



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## 16. Other information

**This data sheet contains changes from the previous version in section(s)**

9, 14, 15

### **Health, Safety & Environment Policy**

We will strive to ensure that our operations and products meet the needs of the present global community without compromising the ability of future generations to meet their needs

We accept that the success of our business is dependent on the supply of products and services that will benefit society whilst ensuring human safety and protection of the environment and natural resources

Within the framework of our commitment to the Responsible Care program, we will provide a healthy and safe work environment for employees and will responsibly manage our products at all stages of their life cycle in order to protect human health and the environment whilst maintaining high production standards of operation

TO MEET THIS COMMITMENT WE WILL:

- Comply with or exceed applicable national and international regulatory requirements and other requirements to which we subscribe
- Communicate openly and actively encourage dialogue with employees, customers and community concerning our products and operations
- Implement documented management systems consistent with and for promotion of the Responsible Care ethics
- Develop and supply products that can be manufactured, transported, used and disposed of safely whilst best meeting the needs of our customers
- Regularly assess, continually improve and responsibly manage health, safety and environmental risks associated with products and processes throughout their life-cycles
- Share knowledge and expertise with others and seek to learn from and incorporate improved practices into our own operations
- Educate and train employees, contractors and customers to improve their HSE performance
- Communicate up-to-date information to enable our workers, customers and other interested parties to handle our products in a safe and environmentally responsible manner
- Endeavor to work with customers, suppliers, distributors and contractors to foster the safe use, transport and disposal of our chemicals
- Support Product Stewardship programs in cooperation with customers, distributors and transporters



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**End of safety data sheet**