

# SAFETY DATA SHEET



## 1. IDENTIFICATION

### Product identifier

**Product Name** Bismuth Nitrate, 0.005M

### Other means of identification

BN6891-B

### Distributor Address

Best Sanitizers, Inc.  
PO Box 1360  
Penn Valley, CA 95946

### Emergency telephone number

**Emergency Phone Numbers** For Transportation Emergencies, call  
Aquaphoenix Scientific: 1-800-255-3924

## 2. HAZARDS IDENTIFICATION

### Classification

This product is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200).

Skin Corrosion

Category 1B

### **Signal word**

**Danger**

### **Hazard statements**

Causes severe skin burns and eye damage.



**Appearance** Aqueous solution

**Physical State** Liquid

**Odor** Odorless

### Precautionary Statements - Prevention

If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.

Read label before use.

Do not eat, drink, or smoke when using this product.

Do not breathe dust/fume/gas/mist/vapors/spray.

Wash skin thoroughly after handling.

Wear protective gloves/protective clothing/eye protection/face protection.

IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. Wash contaminated clothing before reuse.

IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Immediately call a POISON CENTER or doctor. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing.

Keep only in original container. Store locked up.

Dispose of contents and container as instructed in Section 13.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Weight %	Trade Secret
Bismuth Nitrate Pentahydrate	10035-06-0	0.34	
Nitric Acid	7697-37-2	6.04	
Purified water	7732-18-5	93.62	

### 4. FIRST AID MEASURES

#### **First aid measures**

##### **Eye Contact**

Hold eye(s) open and rinse slowly and gently with water for 30 minutes. Remove contact lenses if present, after first 5 minutes, then continue rinsing eye(s). Seek medical advice/attention.

##### **Skin Contact**

Wash affected area with soap and water. Rinse/flush exposed skin gently using water for at least 30 minutes. Seek immediate medical attention.

##### **Inhalation**

Remove to fresh air. Seek immediate medical attention if discomfort or irritation persists.

##### **Ingestion**

Rinse mouth thoroughly. Do NOT induce vomiting.

Drink sips of water

Seek medical attention if irritation, discomfort, or vomiting persists.

#### **Most important symptoms and effects, both acute and delayed**

##### **Most Important Symptoms and Effects**

Irritation/burns. Headache. Shortness of breath. May cause severe burns, blindness and/or permanent damage. May cause burns, deep penetrating ulcerations of the skin, delayed tissue destruction, redness, pain. May cause gastrointestinal irritation with nausea, vomiting and diarrhea.

**Indication of any immediate medical attention and special treatment needed**

If seeking medical attention, provide SDS document to physician.

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**5. FIRE-FIGHTING MEASURES**

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**Suitable Extinguishing Media**

If in laboratory setting, follow laboratory fire suppression procedures. Use appropriate suppression agents for adjacent combustible materials or sources of ignition.

**Unsuitable Extinguishing Media**

None.

**Specific Hazards Arising from the Chemical**

Combustion products may include carbon oxides or other toxic vapors.

**Protective equipment and precautions for firefighters**

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

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**6. ACCIDENTAL RELEASE MEASURES**

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**Personal precautions, protective equipment, and emergency procedures****Personal Precautions**

Use personal protection recommended in Section 8. Ensure adequate ventilation, especially in confined areas. Keep unprotected persons away. Keep away from ignition sources. Protect from heat. Stop the spill, if possible. Contain spilled material by diking or using inert absorbent.

**Environmental precautions****Environmental Precautions**

Prevent entry into waterways, sewers, basements, or confined areas. See Section 12 for additional ecological information.

**Methods and material for containment and cleaning up****Methods for Containment**

If in a laboratory setting, follow Chemical Hygiene Plan procedures. Always obey local regulations. Place into properly labeled containers for recovery or disposal. If necessary, use trained response staff/contractor.

**Methods for Cleaning Up**

Collect liquids using vacuum or by use of absorbents. Neutralize with calcium carbonate and soda ash. Add water to slurry.

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**7. HANDLING AND STORAGE**

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**Precautions for safe handling****Handling**

Prevent formation of aerosols. Follow good hygiene procedures when handling chemical materials. Do not eat, drink, or smoke or use personal products when using this product. Do not handle with incompatibles. Avoid splashes or spray in enclosed areas.

**Conditions for safe storage, including any incompatibilities****Storage Conditions/  
Incompatible materials**

Keep Containers tightly closed in a dry, cool, and well-ventilated place. Avoid storage near extreme heat, ignition sources or open flame. Keep away from foodstuffs. Store with like hazards. Protect from freezing. Store away from oxidizing agents.

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### Exposure Guidelines

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
Nitric Acid 7697-37-2	TLV-STEL: 4 ppm TLV-TWA: 2 ppm	2 ppm; 5 mg/m <sup>3</sup>	Not Available

ACGIH TLV: American Conference of Governmental Industrial Hygienists - Threshold Limit Value. OSHA PEL: Occupational Safety and Health Administration - Permissible Exposure Limits. NIOSH IDLH: Immediately Dangerous to Life or Health.

### Appropriate engineering controls

#### Engineering Controls

Use in chemical hood only. Emergency eyewash fountains and safety showers should be available in the immediate vicinity of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts below the applicable workplace exposure limits. Occupational exposure limits indicated above. Use under a fume hood. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such as exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area, no leakage from equipment.

### Individual protection measures, such as personal protective equipment

#### Eye/Face Protection

Wear safety glasses with side shields (or goggles).

#### Skin and Body Protection

Wear impermeable and resistant to the product/ substance/ preparation protective gloves. Selection of glove material on consideration of the penetration times, rates of diffusion and degradation.

#### Respiratory Protection

Not required under normal conditions of use. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

#### Hygiene Measures

The usual precautionary measures are to be adhered to when handling chemicals. Keep from food, beverages, and food sources. Immediately remove all soiled and contaminated clothing. Wash face, hands, and any exposed skin thoroughly after handling. Wash contaminated clothing and shoes before reuse. Do not Eat, Drink or Smoke when using this product. Do not inhale gases/fumes/dust/mist/vapors/aerosols. Avoid contact with the eyes and skin.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

### Physical and Chemical Properties

Physical State  
Appearance  
Color

Liquid  
Aqueous solution  
Clear

Odor  
Odor Threshold

Odorless  
Not Determined

Property  
pH

Values  
7

Remarks/ Method  
None known

Melting/freezing point

0°C

None known

<b>Boiling point / boiling range</b>	100°C	None known
<b>Flash Point</b>	Not Applicable	None known
<b>Evaporation rate</b>	Not determined	None known
<b>Flammability (solid, gas)</b>	Not Applicable	None known
<b>Flammability Limits in Air</b>		
Upper flammability limit	0 Vol %	None known
Lower flammability limit	0 Vol %	None known
<b>Vapor pressure</b>	2.3 kPa @ 20°C	None known
<b>Vapor density</b>	0.62	None known
<b>Specific Gravity</b>	1	None known
<b>Water Solubility</b>	None.	None known
<b>Solubility in other solvents</b>	No data available	None known
<b>Partition coefficient:</b>	Not determined	None known
<b>Autoignition temperature</b>	Not determined	None known
<b>Decomposition temperature</b>	Not determined	None known
<b>Kinematic viscosity</b>	No data available	None known
<b>Dynamic viscosity</b>	0.952 mPas @ 20°C	None known

## 10. STABILITY AND REACTIVITY

### Reactivity

None.

### Chemical stability

No decomposition if used and stored according to specifications.

### Possibility of Hazardous Reactions

None.

### Conditions to avoid

Store away from oxidizing agents, strong acids, or bases.

### Incompatible materials

Strong bases. Metallic powder.

### Hazardous Decomposition Products

Nitrogen oxides. Hydrogen nitrate.

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

#### Component Information

Chemical Name	Oral LD50	Dermal LD50	Inhalation LC50
Nitric Acid 7697-37-2	430 mg/kg (rat)	-	67 ppm (rat, 4h)
Bismuth Nitrate Pentahydrate 10035-06-0	5 g/kg (Bismuth) (rat)	-	-

**Information on toxicological effects**

Sensitization	No Information Available
Germ cell mutagenicity	No Information Available
Carcinogenicity	No Information Available
Reproductive toxicity	No Information Available
STOT single exposure	No Information Available
STOT repeated exposure	No Information Available

**12. Ecological Data****Ecotoxicity**

No Information Available

**Persistence and Degradability**

Readily degradable in the environment.

**Bioaccumulation**

No Bioaccumulative

**Mobility in soil**

Aqueous solution has high mobility in soil.

**Other adverse effects**

No additional information.

**13. DISPOSAL CONSIDERATIONS****Disposal methods**

Disposal should be in accordance with applicable regional, national, and local laws and regulations. Do not dispose together with household garbage. Do not allow product to reach sewage system or open water.

**14. TRANSPORT INFORMATION****DOT**

UN/ID/NA number: UN 3264

Proper shipping name: Corrosive Liquid, Acidic, Inorganic, N.O.S.

Class: 8

Packing group: II

**15. REGULATORY INFORMATION****Chemical Inventories**

**TSCA** Complies

**DSL/NDSL** Complies

**TSCA** - United States Toxic Substances Control Act Section 8(b) Inventory

**DSL/NDSL** - Canadian Domestic Substances List/Non-Domestic Substances List

## **U.S. Federal Regulations**

### **SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization of 1986 (SARA). 7697-37-2 Nitric acid 1.0% de minimis concentration.

### **SARA 311/312 Hazard Categories**

Acute Health Hazard	Yes
Chronic Health Hazard	No
Fire Hazard	No
Sudden Release of Pressure Hazard	No
Reactive Hazard	Yes

### **CERCLA**

7697-37-3 Nitric acid 1000 lbs.

## **US State Regulations**

### **California Proposition 65**

None of the ingredients are listed.

## **16. OTHER INFORMATION**

<b>NFPA</b>	<b>Health Hazard</b>	<b>2</b>	<b>Flammability</b>	<b>0</b>	<b>Instability</b>	<b>0</b>	<b>Physical and Chemical Hazards</b>	<b>0</b>
<b>HMIS</b>	<b>Health Hazard</b>	<b>2</b>	<b>Flammability</b>	<b>0</b>	<b>Physical Hazard</b>	<b>0</b>	<b>Personal Protection</b>	<b>X</b>

**Prepared By** Technical Department

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### **Reference**

### **General Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information, and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal, and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

**End of Safety Data Sheet**