



# SAFETY DATA SHEET

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## SECTION 1 PRODUCT AND COMPANY INFORMATION

PRODUCT NAME: **Bismuth (III) oxide**

PRODUCT NO: 1252

CAS NO: 1304-76-3

SYNONYMS: Dibismuth trioxide

### MANUFACTURER:

Prochem, Inc.  
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IN CASE OF TRANSPORTATION EMERGENCY CONTACT CHEM-TREC: 1-800-424-9300

## SECTION 2 HAZARDS IDENTIFICATION

### CLASSIFICATION OF SUBSTANCE OR MIXTURE

Not a dangerous substance according to the GHS

### HMIS CLASSIFICATION:

Health: 1 Flammability: 0 Reactivity: 0

### NFPA RATING:

Health: 0 Fire: 0 Reactivity Hazard: 0

**POTENTIAL HEALTH EFFECTS:** Inhalation and Ingestion

**EYE CONTACT:** May cause slight to mild irritation of the eyes.

**SKIN CONTACT:** May cause slight to mild irritation of the skin.

**INHALATION:** May be irritating to the nose, mucous membranes, and respiratory tract.

**INGESTION:** In large doses, bismuth may be toxic, causing gingivitis, ulcers, diarrhea, malaise, and dermatitis.

**CHRONIC HEALTH EFFECTS:** Prolonged exposure to bismuth compounds can cause metal line on gums, foul breath, and mild kidney damage.

**ACUTE HEALTH EFFECTS:** Irritating to skin, eyes and respiratory tract. In large doses, bismuth may be toxic, causing gingivitis, ulcers, diarrhea, malaise, and dermatitis.

## SECTION 3 COMPOSITION / INFORMATION ON INGREDIENTS

Formula:  $\text{Bi}_2\text{O}_3$

Molecular Weight: 465.96

CHEMICAL NAME	CAS#	%
Bismuth oxide	1304-76-3	100

## SECTION 4 FIRST AID MEASURES

**EYE EXPOSURE:** Immediately flush the eyes with copious amounts of water for at least 15 minutes. Assure flushing under eyelids. A victim may need assistance in keeping their eyelids open. Get immediate competent medical attention.

**SKIN EXPOSURE:** Wash affected area with water. Remove contaminated clothes if necessary. Seek medical assistance if irritation persists.

**INHALATION:** Remove victim to fresh air. Closely monitor the victim for signs of respiratory problems, such as difficulty breathing, coughing, wheezing, or pain. In such cases seek immediate medical assistance.

**INGESTION:** Seek medical assistance immediately. Keep the victim calm. Give the victim water (only if conscious). Induce vomiting only if directed by medical personnel.

## SECTION 5 FIREFIGHTING MEASURES

**FLASH POINT:** Not applicable

**AUTO IGNITION TEMPERATURE:** None

**EXPLOSION LIMITS:** None

**EXTINGUISHING MEDIUM:** Carbon dioxide, dry chemical, or water.

**SPECIAL FIRE FIGHTING PROCEDURES:** If involved in a fire, fire fighters should be equipped with a NIOSH approved positive pressure self-contained breathing apparatus and full protective clothing.

**HAZARDOUS COMBUSTION AND DECOMPOSITION PRODUCTS:** No hazardous combustion or decomposition products.

**UNUSUAL FIRE OR EXPLOSION HAZARDS:** No unusual fire or explosion hazards.

## SECTION 6 ACCIDENTAL RELEASE MEASURES

**PERSONAL PRECAUTIONS:** Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist, or gas. Avoid breathing dust.

**ENVIRONMENTAL PRECAUTIONS:** Do not let any product enter drains.

**METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP:** Small spills can be mixed with vermiculite or sodium carbonate and swept up.

## SECTION 7 HANDLING AND STORAGE

**PRECAUTIONS FOR SAFE HANDLING:** Avoid formation of dust and aerosols. Provide appropriate exhaust ventilation at places where dust is formed.

**CONDITIONS FOR SAFE STORAGE:** Keep container tightly closed in a dry and well-ventilated place.

## SECTION 8 EXPOSURE CONTROLS AND PERSONAL PROTECTION

**EYE PROTECTION:** Always wear approved safety glasses with side shields, or safety goggles, face shield when handling a chemical substance in the laboratory.

**SKIN PROTECTION:** Chemical-resistant gloves.

**VENTILATION:** If possible, handle the material in an efficient fume hood.

**RESPIRATOR:** If in form of fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 19-10.134.

## SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

**COLOR AND FORM:** Yellow powder

**MELTING POINT:** 825° C

**BOILING POINT:** 1890°C

**MOLECULAR WEIGHT:** 465.96

**ODOR:** Not available

**SPECIFIC GRAVITY:** 8.93 gm/ml

**VAPOR PRESSURE:** Not applicable

**VAPOR DENSITY (AIR = 1):** 8.93 g/cm<sup>3</sup> at 20°C

**SOLUBILITY IN WATER:** Insoluble

## SECTION 10 STABILITY AND REACTIVITY

**STABILITY:** Air and moisture stable

**HAZARDOUS POLYMERIZATION:** No hazardous polymerization.

**CONDITIONS TO AVOID:** None

**INCOMPATIBILITY:** Active metals

**DECOMPOSITION PRODUCTS:** None

## SECTION 11 TOXICOLOGICAL DATA

**RTECS DATA:** Oral (rat); LD50:5 gm/kg. Oral (mouse); LD50:10 gm/kg.

**CARCINOGENIC EFFECTS:** No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen.

**MUTAGENIC EFFECTS:** No data

**TETRAUTOGENIC EFFECTS:** No data

**TOXICITY DATA:** No data

To the best of our knowledge the toxicological effects of this compound have not been fully investigated.

## SECTION 12 ECOLOGICAL DATA

No information available

## SECTION 13 DISPOSAL CONSIDERATIONS

Dispose of in according to local state and federal regulations.

## SECTION 14 TRANSPORTATION DATA

Not a dangerous good

## SECTION 15 REGULATORY INFORMATION

**TSCA:** Listed in the TSCA inventory

**OSHA HAZARDS:** Target Organ Effect

**SARA 302 COMPONENTS:** No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

**SARA (TITLE 313):** Not listed

**SARA 311/312 HAZARD:** Chronic Health Hazard

**MASSACHUSETTS RIGHT TO KNOW COMPONENTS:** No components are subject to the Massachusetts Right to Know Act.

**PENNSYLVANIA RIGHT TO KNOW COMPONENTS:** Dibismuth trioxide

**NEW JERSEY RIGHT TO KNOW COMPONENTS:** Dibismuth trioxide

**CALIFORNIA PROP. 65 COMPONENTS:** This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

## SECTION 16 OTHER INFORMATION

**DISCLAIMER:** The information herein is believed to be accurate and reliable as of the date compiled. However, Prochem, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information in this document or any use of the product based on the information.

**DATE PREPARED:** 02/14

**SDS DEPT.**