PURITAN PRODUCTS

Effective Date: 01/01/13
Replaces Revision: 11/21/08

NON-EMERGENCY TELEPHONE
610-866-4225

24-HOUR CHEMTREC EMERGENCY TELEPHONE
800-424-9300

SDS – SAFETY DATA SHEET

1. Identification

Product Identifier: BISMUTH TRIOXIDE
Synonyms: Bismuth Oxide, Bismuth Yellow, Bismuthous Oxide, Dibismuth Trioxide
Chemical Formula: Bi_2O_3
Recommended Use of the Chemical and Restrictions On Use: Laboratory Reagent
Manufacturer / Supplier: Puritan Products; 2290 Avenue A, Bethlehem, PA 18017 **Phone:** 610-866-4225
Emergency Phone Number: 24-Hour Chemtrec Emergency Telephone 800-424-9300

2. Hazard(s) Identification

Classification of the Substance or Mixture:
Acute toxicity, Oral (Category 5)

Risk Phrases:
None

Label Elements:

Trade Name: BISMUTH TRIOXIDE

Signal Word: Warning

Pictogram: None

Hazard Statements: H303: May be harmful if swallowed.

Precautionary Statements: None

3. Composition / Information on Ingredients

CAS Number: 1304-76-3
EC Number: 215-134-7
Molecular Weight: 465.96 g/mol

Ingredient	CAS Number	EC Number	Percent	Hazardous	Chemical Characterization
Bismuth Trioxide	1304-76-3	215-134-7	99 -100%	Yes	Substance

4. First-aid Measures

Inhalation: If inhaled, remove to fresh air. Get medical attention for any breathing difficulty.

Ingestion: Give several glasses of water to drink to dilute. If large amounts were swallowed, get medical advice.

Skin Contact: Remove any contaminated clothing. Wash exposed area with soap and water. Get medical advice if irritation develops or persists.

Eye Contact: In case of contact, immediately flush eyes with plenty of water for at least 15 minutes, lifting upper and lower eyelids occasionally. Call a physician if irritation persists.

5. Fire-fighting Measures

Fire: Not considered to be a fire hazard.

Explosion: Not considered to be an explosion hazard.

Fire Extinguishing Media: Use extinguishing media appropriate for surrounding fire.

Special Information: In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full face piece operated in the pressure demand or other positive pressure mode.

6. Accidental Release Measures

Personal Precautions, Protective Equipment and Emergency Procedures: Wear appropriate personal protective equipment as specified in Section 8.

Environmental Precautions and Methods and Materials for Containment and Cleaning Up: Ventilate area of leak or spill. Pick up and place in a suitable container for reclamation or disposal, using a method that does not generate dust, such as vacuuming or wet sweeping.

7. Handling and Storage

Precautions for Safe Handling and Conditions for Safe Storage, Including Any Incompatibilities: Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from any source of heat or ignition. Isolate from incompatible substances. Containers of this material may be hazardous when empty since they retain product residues (dust, solids.) Observe all warnings and precautions listed for the product.

8. Exposure Controls / Personal Protection

Airborne Exposure Limits:
OSHA Permissible Exposure Limit (PEL): 15 mg/m3 total dust, 5 mg/m3 respirable fraction for nuisance dusts.
ACGIH Threshold Limit Value (TLV) for Particulates (insoluble or poorly soluble) Not Otherwise Specified (PNOS): 3 mg/m3 respirable particles and 10 mg/m3 inhalable particles.

Ventilation System: A system of local and / or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

Personal Respirators (NIOSH Approved): If the exposure limit is exceeded and engineering controls are not feasible, a half face piece particulate respirator (NIOSH type N95 or better filters) may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. A full face piece particulate respirator (NIOSH type N100 filters) may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency, or respirator supplier, whichever is lowest. If oil particles (e.g. lubricants, cutting fluids, Glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full face piece positive-pressure, air-supplied respirator. WARNING: Air-purifying respirators do not protect workers in Oxygen-deficient atmospheres.

Skin Protection: Wear protective gloves and clean body-covering clothing.

Eye Protection: Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

9. Physical and Chemical Properties

Appearance: Yellow powder or crystals
Odor: Odorless
Odor Threshold: Not determined
pH: No data available
% Volatiles by volume @ 21C (70F): 0
Melting Point: 820C (1508F)
Boiling Point / Boiling Range: 1890C (3434F)
Flash Point: Not applicable
Evaporation Rate (BuAc=1): No data available
Flammability: Not applicable
Upper / Lower Flammability or Explosive Limits: Not applicable
Vapor Pressure (mm Hg): No data available
Vapor Density (Air=1): No data available
Relative Density: 8.9
Solubility: Insoluble in water
Partition Coefficient: n-octanol / water: No data available
Auto-ignition Temperature: Not applicable
Decomposition Temperature: No data available
Viscosity: No data available

10. Stability and Reactivity

Reactivity and / or Chemical Stability: Stable under ordinary use and storage conditions.

Possibility of Hazardous Reactions and Conditions to Avoid: No information found.

Incompatible Materials: No incompatibility data found.

Hazardous Decomposition Products: May emit metallic fumes at high temperatures.

11. Toxicological Information

Emergency Overview: As part of good industrial and personal hygiene and safety procedure, avoid all unnecessary exposure to the chemical substance and ensure prompt removal from skin, eyes and clothing.

Potential Health Effects:

Inhalation: Not expected to be a health hazard.

Ingestion: Low toxicity. Bismuth salts are poorly absorbed. Should absorption occur, symptoms may include loss of appetite, headache, skin rashes, kidney damage, and, rarely, mild jaundice.

Skin Contact: Not expected to be a health hazard.

Eye Contact: Not expected to be a health hazard.

Chronic Exposure: Repeated or prolonged ingestion may cause a "bismuth line", black spots on the gums, foul breath, and salivation.

Aggravation of Pre-existing Conditions: No information found.

Specific Target Organ Toxicity - Single Exposure (Globally Harmonized System:) No data available.

Specific Target Organ Toxicity - Repeated Exposure (Globally Harmonized System:) No data available.

Numerical Measures of Toxicity: Cancer Lists: NTP Carcinogen

Ingredient	Known	Anticipated	IARC Category
Bismuth Trioxide (1304-76-3)	No	No	None

Acute Toxicity: Oral LD50 (rat): 5 g/kg.

12. Ecological Information

Ecotoxicity: No information found.

Persistence and Degradability: No information found.

Bioaccumulative Potential: No information found.

Mobility in Soil: No information found.

Other adverse effects: No information found.

13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information

Land Transport ADR/RID and GGVS/GGVE (Cross Border / Domestic)
Not regulated

Maritime Transport IMDG/GGVSea
Not regulated

Air Transport ICAO-TI and IATA-DGR
Not regulated

15. Regulatory Information

Chemical Inventory Status – Part 1

Ingredient	TSCA	EC	Japan	Australia
Bismuth Trioxide (1304-76-3)	Yes	Yes	Yes	Yes

Chemical Inventory Status – Part 2

Ingredient	Korea	Canada		Phil.
		DSL	NDSL	
Bismuth Trioxide (1304-76-3)	Yes	Yes	No	Yes

Federal, State & International Regulations - Part 1

	SARA 302		SARA 313	
Ingredient	RQ	TPQ	List Chemical	Catg.
Bismuth Trioxide (1304-76-3)	No	No	No	No

Federal, State & International Regulations - Part 2

	RCRA		TSCA
Ingredient	CERCLA	261.33	8(d)
Bismuth Trioxide (1304-76-3)	No	No	No

Chemical Weapons Convention: No		**TSCA 12(b):** No		**CDTA:** No
SARA 311/312:	**Acute:** No	**Chronic:** No	**Fire:** No	**Pressure**: No
Reactivity: No		Pure / Solid		

Australian Hazchem Code: Not classified

Poison Schedule: None allocated

16. Other Information

THE INFORMATION CONTAINED IN THIS DATA SHEET IS BASED ON THE DATA AVAILABLE TO PURITAN PRODUCTS AT THIS TIME. WHILE BELIEVED TO BE ACCURATE, PURITAN PRODUCTS DOES NOT CLAIM IT TO BE ALL INCLUSIVE. IT IS PROVIDED INDEPENDENT OF ANY SALE OF THE PRODUCT, FOR THE PURPOSE OF HAZARD COMMUNICATION, AND AS A GUIDE FOR THE APPROPRIATE PRECAUTIONARY HANDLING OF THE PRODUCT BY PROPERLY TRAINED INDIVIDUALS. IT IS NOT INTENDED TO PROVIDE PRODUCT PERFORMANCE OR APPLICABILITY INFORMATION, AND NO EXPRESS OR IMPLIED WARRANTY OF ANY KIND IS MADE WITH RESPECT TO THE PRODUCT, THE UNDERLYING PRODUCT DATA, OR THE INFORMATION CONTAINED HEREIN.

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