# BISMUTH TRIOXIDE

## MATERIAL SAFETY DATA SHEET

**INTEGRA Chemical Company**

**Address:** 1216 6th Ave N, Kent WA 98032

**Phone:** 253-479-7000

24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)

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### Product Identification

**Product Name:** BISMUTH TRIOXIDE

**Synonyms:**

**Chemical Formula:** Bi2O3

**Formula Weight:** 465.96

**Chemical Family:**

**Integra Product Numbers:** B657.10

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### Hazard Overview

**HMIS Rating:** 1-0-0-B  **NFPA Rating:** NE

**Warning Label:** Caution.

Use safe chemical handling practices. Avoid contact with skin, eyes and clothing. Wash thoroughly after handling.

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### Components

<table>
<thead>
<tr>
<th>Component</th>
<th>CAS #</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bismuth trioxide</td>
<td>01304-76-3</td>
<td>100</td>
</tr>
</tbody>
</table>

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### Physical Data

**Boiling Point:** 1890 ºC

**Melting Point:** 820 ºC

**Specific Gravity:** NA

**Evaporation Rate:** NA

**Vapor Pressure:** NA

**Vapor Density:** NA Air = 1

**Solubility:** Insoluble in water.

**Appearance and Odor:**

Yellow powder or crystals. Odorless.

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### Fire and Explosion Data

**Flash Point:** NA

**Auto-ignition Temperature:** NA

**Flammable Limits (% by volume in air):**

Upper: NA  Lower: NA

**Fire Extinguishing Media:**

Use extinguishing media appropriate for surrounding fire.

**Special Firefighting Procedures:**

Use water to cool nearby containers and structures. Wear full protective equipment, including suitable respiratory protection.

**Unusual Fire and Explosion Hazards:**

None identified

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### Health Hazard Information

**Effects of Overexposure**

**Skin Contact:**

No harmful effects expected.

**Eye Contact:**
BISMUTH TRIOXIDE
MATERIAL SAFETY DATA SHEET

INTEGRA Chemical Company
1216 6th Ave N
Kent WA 98032
Phone: 253-479-7000

MSDS Number: B657
Revision Date: 16-Apr-08
Revision No.: 003

24 Hour Emergency Response: CHEMTREC 800-424-9300 (Outside USA 703-527-3887)

Health Hazard Information

Eye Contact:
No harmful effects expected.

Ingestion:
Ingestion of small amounts is not likely to produce harmful effects. Bismuth salts are not easily absorbed. If enough material is absorbed, symptoms may included headache, rashes, depressed appetite, kidney damage, and mild jaundice.

Inhalation:
No harmful effects expected.

Chronic Effects of Overexposure:
Repeated or prolonged ingestion may result in a “bismuth line”, black spots on the gums, foul breath, salivation.

Exposure Limits:

<table>
<thead>
<tr>
<th>Component</th>
<th>TWA</th>
<th>STEL</th>
<th>Ceiling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bismuth trioxide</td>
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Toxicity Data:

LD50 (oral, rat) 5 g/kg

Medical Conditions Generally Aggravated by Exposure:
None Identified

Target Organs:
None Identified

Reproductive Effects:
None Identified

Carcinogenicity:
None Identified

Component NTP Listing IARC Listing OSHA Regulated
Bismuth trioxide No listing No listing

Emergency First Aid Procedures

Skin Contact:
Wash with soap and water. Seek medical attention if irritation develops.

Eye Contact:
Flush eyes with water. If irritation persists, seek medical attention.

Inhalation:
Remove to fresh air.

Ingestion:
If conscious, give victim large amounts of water. Seek medical attention.

Additional First aid and Treatment Notes:
No information available

Reactivity Data
Reactivity Data

Stability: Stable
Hazardous Polymerization: Will Not Occur
Incompatibles:
   None identified
Decomposition Products:
   High temperatures may result in emission of metallic fumes.
Conditions to Avoid:
   None identified

Spill and Disposal Procedures

Spill and Leak Procedures:
   Prevent spread of spill.  Sweep or scoop into suitable disposal container.
Disposal Procedures:
   Dispose in accordance with all Local, State and Federal regulations.

Protective Equipment

Ventilation:
   Use adequate general or local exhaust ventilation to keep fume and/or dust levels as low as possible.
Respiratory Protection:
   None needed unless use generates annoying or irritating dusts, mists or vapors.  Use a dust/mist respirator mask if necessary.
Skin and Eye Protective Equipment:
   Safety goggles, protective clothing and gloves.  Maintain an eyewash station and safety shower nearby.

Storage and Handling Precautions

Storage Area: GENERAL
   Store in a cool, dry, well-ventilated area.  Store away from incompatible materials.  Protect containers from physical damage.

Transportation Information

☐ Regulated Material domestic ground transportation
   (reference:  CFR Title 49, Transportation)
   Proper Shipping Name:
   UN or NA Identification number: Hazard Class and Label:
   Packing Group: Subsidiary Risk and Label:

☐ Regulated Material via Air Transportation
   (reference:  ICAO Technical Instructions for the Safe Transport of Dangerous Goods by Air)
   Proper Shipping Name:
   UN Identification Number: Hazard Class and Label:
   Packing Group: Subsidiary Risk and Label:
**Transportation Information**

<table>
<thead>
<tr>
<th>Packing Instruction</th>
<th>Max net qty per package</th>
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</thead>
<tbody>
<tr>
<td>Passenger Aircraft:</td>
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<tr>
<td>Cargo Aircraft:</td>
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**Regulatory Information**

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<thead>
<tr>
<th>Component</th>
<th>TSCA Inventory</th>
<th>CERCLA RQ</th>
<th>SARA EHS TPQ</th>
<th>SARA 313 Toxic Release de minimus</th>
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<tbody>
<tr>
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**SARA Hazard Categories:**
- Acute: ✔️
- Chronic: ✔️
- Flammability: ✔️
- Pressure: ✔️
- Reactivity: ✔️

**Clean Air Act Categories:**
- SOCMI: ✔️
- HAP: ✔️
- Volatile HAP: ✔️
- Organic HAP: ✔️
- Ozone Depleting: ✔️

**MSDS Revision History:**
- 002 - Format revisions; updated header phone number
- 003 - Updated Header Information

NE = Not established, NA = Not applicable or Not available

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***** END OF MSDS *****