

# **SAFETY DATA SHEET**

Revision Date 24-Jun-2024 Revision Number 1

## 1. Identification

Product Name Bismuth(III) oxide

Cat No. : \$37821

**CAS No** 1304-76-3

Synonyms No information available

Recommended Use Laboratory chemicals.

Uses advised against Food, drug, pesticide or biocidal product use.

### Details of the supplier of the safety data sheet

### Company

Thermo Fisher Scientific Chemicals, Inc. 30 Bond Street Ward Hill, MA 01835-8099

Tel: 800-343-0660 Fax: 800-322-4757

#### **Emergency Telephone Number**

For information **US** call: 001-800-227-6701 / **Europe** call: +32 14 57 52 11 Emergency Number **US**:001-201-796-7100 / **Europe**: +32 14 57 52 99 **CHEMTREC** Tel. No. **US**:001-800-424-9300 / **Europe**:001-703-527-3887

## 2. Hazard(s) identification

#### Classification

Classification under 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

This chemical is not considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

## Label Elements

None required

#### Hazards not otherwise classified (HNOC)

None identified

# 3. Composition/Information on Ingredients

Component	CAS No	Weight %
Bismuth oxide	1304-76-3	<=100

#### 4. First-aid measures

Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.

**Skin Contact** Wash off immediately with plenty of water for at least 15 minutes. Get medical attention

immediately if symptoms occur.

None reasonably foreseeable.

**Inhalation** Remove to fresh air. Get medical attention immediately if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if

symptoms occur.

Most important symptoms and

effects

No information available

Notes to Physician Treat symptomatically

# 5. Fire-fighting measures

Suitable Extinguishing Media Not combustible.

Unsuitable Extinguishing Media No information available

Flash Point No information available Method - No information available

**Autoignition Temperature** 

**Explosion Limits** 

Upper No data available
Lower No data available
Sensitivity to Mechanical Impact No information available
Sensitivity to Static Discharge No information available

**Specific Hazards Arising from the Chemical** 

Keep product and empty container away from heat and sources of ignition.

### **Hazardous Combustion Products**

None known.

### **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.

**NFPA** 

Health Flammability Instability Physical hazards
0 0 0 -

### 6. Accidental release measures

Personal Precautions Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust

formation.

Environmental Precautions Should not be released into the environment. See Section 12 for additional Ecological

Information.

**Methods for Containment and Clean** Sweep up and shovel into suitable containers for disposal. Avoid dust formation. **Up** 

### 7. Handling and storage

**Handling** Wear personal protective equipment/face protection. Ensure adequate ventilation. Avoid

contact with skin, eyes or clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage.** Keep containers tightly closed in a dry, cool and well-ventilated place. Incompatible

Materials. Oxidizing agent.

## 8. Exposure controls / personal protection

Exposure Guidelines This product does not contain any hazardous materials with occupational exposure

limitsestablished by the region specific regulatory bodies.

Engineering Measures None under normal use conditions.

Personal Protective Equipment

**Eye/face Protection** Wear appropriate protective eyeglasses or chemical safety goggles as described by

OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard

EN166.

**Skin and body protection** Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection** No protective equipment is needed under normal use conditions.

**Recommended Filter type:** Particle filter.

Hygiene Measures Handle in accordance with good industrial hygiene and safety practice.

### 9. Physical and chemical properties

Physical State Solid Appearance Yellow

Odor No information available
Odor Threshold No information available
No information available

pH No information available
Melting Point/Range 817 °C / 1502.6 °F
Boiling Point/Range ~ 1890 °C / 3434 °F
Flash Point No information available

Evaporation Rate Not applicable

Flammability (solid,gas) No information available

Flammability or explosive limits

Upper No data available
Lower No data available
Vapor Pressure No information available

Vapor DensityNot applicableSpecific Gravity8.9 g/cm3

Solubility
No information available
Partition coefficient; n-octanol/water
No data available

Autoignition TemperatureNo information availableDecomposition TemperatureNo information available

Viscosity Not applicable Molecular Formula Bi2 O3

Molecular FormulaBi2 O3Molecular Weight465.96

## 10. Stability and reactivity

**Reactive Hazard** None known, based on information available

Stability Stable under normal conditions.

**Conditions to Avoid** Incompatible products.

Oxidizing agent **Incompatible Materials** 

Hazardous Decomposition Products None under normal use conditions

**Hazardous Polymerization** Hazardous polymerization does not occur.

**Hazardous Reactions** None under normal processing.

# 11. Toxicological information

**Acute Toxicity** 

# **Product Information**

**Component Information** 

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation	
Bismuth oxide	LD50 = 5 g/kg (Rat)	Not listed	LC50 > 5.07 mg/L (Rat) 4 h	

**Toxicologically Synergistic** 

No information available

**Products** 

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Irritation No information available

Sensitization No information available

Carcinogenicity The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS No	IARC	NTP	ACGIH	OSHA	Mexico
Bismuth oxide	1304-76-3	Not listed				

**Mutagenic Effects** No information available

No information available. **Reproductive Effects** 

**Developmental Effects** No information available.

**Teratogenicity** No information available.

STOT - single exposure None known STOT - repeated exposure None known

**Aspiration hazard** No information available

Symptoms / effects, both acute and No information available

delayed

**Endocrine Disruptor Information** No information available

Other Adverse Effects The toxicological properties have not been fully investigated.

# 12. Ecological information

**Ecotoxicity** 

Persistence and Degradability No information available

**Bioaccumulation/ Accumulation** No information available.

**Mobility** No information available.

### 13. Disposal considerations

Waste Disposal Methods Chemical waste generators must determine whether a discarded chemical is classified as a

hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

14. Transport information

DOTNot regulatedTDGNot regulatedIATANot regulatedIMDG/IMONot regulated

## 15. Regulatory information

#### **United States of America Inventory**

Component	CAS No	TSCA	TSCA Inventory notification - Active-Inactive	TSCA - EPA Regulatory Flags
Bismuth oxide	1304-76-3	X	ACTIVE	-

#### Legend:

TSCA US EPA (TSCA) - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

TSCA - Per 40 CFR 751, Regulation of Certain Chemical Substances & Mixtures, Under TSCA Section 6(h) (PBT)

Not applicable

TSCA 12(b) - Notices of Export

Not applicable

#### **International Inventories**

Canada (DSL/NDSL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Japan (ISHL), Australia (AICS), China (IECSC), Korea (KECL).

Component	CAS No	DSL	NDSL	EINECS	PICCS	ENCS	ISHL	AICS	IECSC	KECL
Bismuth oxide	1304-76-3	Х	-	215-134-7	Χ	Χ	Х	Х	Х	KE-09903

KECL - NIER number or KE number (http://ncis.nier.go.kr/en/main.do)

#### U.S. Federal Regulations

#### SARA 313

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372

#### SARA 311/312 Hazard Categories

Should this product meet EPCRA 311/312 Tier reporting criteria at 40 CFR 370, refer to Section 2 of this SDS for appropriate classifications.

CWA (Clean Water Act) Not applicable

Clean Air Act Not applicable

**OSHA** - Occupational Safety and

Not applicable

Health Administration

#### **CERCLA**

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

**California Proposition 65**This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know

Regulations

Not applicable

**U.S. Department of Transportation** 

Reportable Quantity (RQ): N
DOT Marine Pollutant N
DOT Severe Marine Pollutant N

U.S. Department of Homeland

Security

This product does not contain any DHS chemicals.

Other International Regulations

Mexico - Grade No information available

Authorisation/Restrictions according to EU REACH Not applicable

Component	CAS No	REACH (1907/2006) -	REACH (1907/2006) -	REACH Regulation (EC
-		Annex XIV - Substances	Annex XVII - Restrictions	1907/2006) article 59 -
		Subject to Authorization	on Certain Dangerous	Candidate List of
		_	Substances	Substances of Very High
				Concern (SVHC)
Bismuth oxide	1304-76-3	-	-	_

## Safety, health and environmental regulations/legislation specific for the substance or mixture

Component	CAS No	OECD HPV	Persistent Organic Pollutant	Ozone Depletion Potential	Restriction of Hazardous Substances (RoHS)
Bismuth oxide	1304-76-3	Listed	Not applicable	Not applicable	Not applicable

Contains component(s) that meet a 'definition' of per & poly fluoroalkyl substance (PFAS)? Not applicable

### Other International Regulations

Component	CAS No	Seveso III Directive (2012/18/EC) - Qualifying Quantities for Major Accident Notification	(2012/18/EC) -	Rotterdam Convention (PIC)	Basel Convention (Hazardous Waste)
Bismuth oxide	1304-76-3	Not applicable	Not applicable	Not applicable	Not applicable

<ol><li>16. Other information</li></ol>

Prepared By Health, Safety and Environmental Department

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#### **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 SDS**