

# Bismuth isopropoxide: sc-300250



The Power to Question

## MATERIAL SAFETY DATA SHEET

### 1 Identification of substance:

**Product Name:** Bismuth isopropoxide  
**Catalog Number:** sc-300250  
**Supplier:** Santa Cruz Biotechnology, Inc.  
2145 Delaware Avenue  
Santa Cruz, California 95060  
800.457.3801 or 831.457.3800

**Emergency:** ChemWatch  
Within the US & Canada: 877-715-9305  
Outside the US & Canada: +800 2436 2255  
(1-800-CHEMCALL) or call +613 9573 3112

### 2 Hazards identification

Classification of the substance or mixture



GHS02 Flame

H228 Flammable solid.



GHS07

H315 Causes skin irritation.  
H319 Causes serious eye irritation.  
H335 May cause respiratory irritation.

Classification according to Directive 67/548/EEC or Directive 1999/45/EC



Xi; Irritant

R36/37/38: Irritating to eyes, respiratory system and skin.



F; Highly flammable

R11: Highly flammable.

Label elements

Labelling according to EU guidelines:

Code letter and hazard designation of product:

Xi Irritant  
F Highly flammable

Risk phrases:

11 Highly flammable.  
36/37/38 Irritating to eyes, respiratory system and skin.

Safety phrases:

16 Keep away from sources of ignition - No smoking.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
37 Wear suitable gloves.

Hazard description:

WHMIS classification



**Classification system**  
**HMIS ratings (scale 0-4)**  
**(Hazardous Materials Identification System)**

HEALTH	1	Health (acute effects) = 1
FIRE	2	Flammability = 2
REACTIVITY	1	Reactivity = 1

**Other hazards**

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

### 3 Composition/information on ingredients

**Chemical characterization: Substances**

**(CAS#) Description:**

Bismuth(III) isopropoxide (CAS# 15049-67-9)

### 4 First aid measures

**Description of first aid measures**

**General information** Immediately remove any clothing soiled by the product.

**After inhalation**

Supply fresh air. If required, provide artificial respiration. Keep patient warm.  
Seek immediate medical advice.

**After skin contact**

Immediately wash with water and soap and rinse thoroughly.  
Seek immediate medical advice.

**After eye contact**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing** Seek immediate medical advice.

### 5 Firefighting measures

**Extinguishing media**

**Suitable extinguishing agents**

In case of fire, use sand, carbon dioxide or powdered extinguishing agent. Never use water.

**For safety reasons unsuitable extinguishing agents** Water

**Special hazards arising from the substance or mixture**

In case of fire, the following can be released:

Carbon monoxide and carbon dioxide

Metal oxide fume

**Advice for firefighters**

**Protective equipment:**

Wear self-contained respirator.

Wear fully protective impervious suit.

### 6 Accidental release measures

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

Wear protective equipment. Keep unprotected persons away.

Ensure adequate ventilation

Keep away from ignition sources

**Environmental precautions:**

Do not allow material to be released to the environment without proper governmental permits.

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

Use neutralizing agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

Do not flush with water or aqueous cleansing agents

Keep away from ignition sources.

**Reference to other sections**

See Section 7 for information on safe handling

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

## 7 Handling and storage

### Handling

#### Precautions for safe handling

Handle under dry protective gas.

Keep container tightly sealed.

Store in cool, dry place in tightly closed containers.

Ensure good ventilation at the workplace.

#### Information about protection against explosions and fires:

Keep ignition sources away.

Protect against electrostatic charges.

Fumes can combine with air to form an explosive mixture.

#### Conditions for safe storage, including any incompatibilities

**Storage** Store at room temperature.

**Requirements to be met by storerooms and receptacles:** Store in a cool location.

#### Information about storage in one common storage facility:

Store away from water/moisture.

Do not store together with acids.

Store away from oxidizing agents.

#### Further information about storage conditions:

Store under dry inert gas.

This product is moisture sensitive.

Keep container tightly sealed.

Store in cool, dry conditions in well sealed containers.

Protect from humidity and water.

## 8 Exposure controls/personal protection

#### Additional information about design of technical systems:

Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

#### Control parameters

**Components with limit values that require monitoring at the workplace:** Not required.

**Additional information:** No data

#### Exposure controls

##### Personal protective equipment

##### General protective and hygienic measures

The usual precautionary measures for handling chemicals should be followed.

Keep away from foodstuffs, beverages and feed.

Remove all soiled and contaminated clothing immediately.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

**Breathing equipment:** Use suitable respirator when high concentrations are present.

##### Protection of hands:

Impervious gloves

Check protective gloves prior to each use for their proper condition.

##### Material of gloves

The selection of suitable gloves not only depends on the material, but also on quality.

Quality will vary from manufacturer to manufacturer.

##### Eye protection:

Safety glasses

Tightly sealed goggles

Full face protection

**Body protection:** Protective work clothing.

## 9 Physical and chemical properties

### Information on basic physical and chemical properties

#### General Information

##### Appearance:

<b>Form:</b>	Powder
<b>Formula:</b>	C <sub>9</sub> H <sub>21</sub> BiO <sub>3</sub>
<b>Weight:</b>	386.24

**pH-value:** Not applicable.

#### Change in condition

<b>Melting point/Melting range:</b>	Not determined
<b>Boiling point/Boiling range:</b>	Not determined
<b>Sublimation temperature / start:</b>	Not determined

<b>Flash point:</b>	Not applicable
<b>Flammability (solid, gaseous)</b>	Highly flammable.
<b>Ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Auto igniting:</b>	Not determined.
<b>Explosion limits:</b>	
Lower:	Not determined
Upper:	Not determined
<b>Vapor pressure:</b>	Not applicable.
<b>Density:</b>	Not determined
<b>Relative density</b>	Not determined.
<b>Vapour density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with Water:</b>	Reacts
<b>Segregation coefficient (n-octanol/water):</b>	Not determined.
<b>Viscosity:</b>	
dynamic:	Not applicable.
kinematic:	Not applicable.
<b>Other information</b>	No further relevant information available.

## 10 Stability and reactivity

### Reactivity

#### Chemical stability

#### Thermal decomposition / conditions to be avoided:

Decomposition will not occur if used and stored according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known

#### Incompatible materials:

Water/moisture

Oxidizing agents

Acids

#### Hazardous decomposition products:

Carbon monoxide and carbon dioxide

Metal oxide fume

## 11 Toxicological information

### Information on toxicological effects

#### Acute toxicity:

#### Primary irritant effect:

**on the skin:** Irritant to skin and mucous membranes.

**on the eye:** Irritating effect.

**Sensitization:** No sensitizing effects known.

#### Subacute to chronic toxicity:

Bismuth compounds are often poorly absorbed. However exposure may cause loss of appetite, headache, skin rash, exodermatitis, kidney injury and jaundice. Repeated or prolonged exposure may cause a bismuth line or black spots on the gums, foul breath and salivation. Exposure to bismuth may cause injury to the mouth, esophagus and stomach. Symptoms may include loss of appetite, headache, skin rash, kidney damage and jaundice.

#### Subacute to chronic toxicity:

Isopropyl alcohol, if formed, may act as a local irritant and in high concentrations as a narcotic with symptoms such as headache, nausea, dizziness, vomiting, mental depression, anesthesia, and coma. Similar symptoms may be caused by ingestion. It can cause corneal burns on contact with the eyes and has caused teratogenic, mutagenic and reproductive effects in laboratory animals.

#### Additional toxicological information:

To the best of our knowledge the acute and chronic toxicity of this substance is not fully known.

No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

## 12 Ecological information

### Toxicity

**Acquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

### Behavior in environmental systems:

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

### Additional ecological information:

#### General notes:

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

Do not allow material to be released to the environment without proper governmental permits.

#### Results of PBT and vPvB assessment

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

## 13 Disposal considerations

### Waste treatment methods

**Recommendation** Consult state, local or national regulations to ensure proper disposal.

### Uncleaned packagings:

**Recommendation:** Disposal must be made according to official regulations.

## 14 Transport information

### DOT regulations:



**Hazard class:** 4.1  
**Identification number:** UN3181  
**Packing group:** III  
**Proper shipping name (technical name):** METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S. (Bismuth(III) isopropoxide)  
**Label** 4.1

### Land transport ADR/RID (cross-border)



**ADR/RID class:** 4.1 (F3) Flammable solids, self-reactive substances and solid desensitised explosives  
**Danger code (Kemler):** 40  
**UN-Number:** 3181  
**Packaging group:** III  
**UN proper shipping name:** 3181 METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S. (Bismuth(III) isopropoxide)

### Maritime transport IMDG:



**IMDG Class:** 4.1  
**UN Number:** 3181  
**Label** 4.1  
**Packaging group:** III  
**EMS Number:** F-A,S-I  
**Marine pollutant:** No  
**Segregation groups** Heavy metals and their salts (including their organometallic compounds)

**Proper shipping name:** METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.  
(Bismuth(III) isopropoxide)

**Air transport ICAO-TI and IATA-DGR:**



**ICAO/IATA Class:** 4.1  
**UN/ID Number:** 3181  
**Label:** 4.1  
**Packaging group:** III  
**Proper shipping name:** METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S.  
(Bismuth(III) isopropoxide)

**UN "Model Regulation":** UN3181, METAL SALTS OF ORGANIC COMPOUNDS, FLAMMABLE, N.O.S., 4.1, III  
**Special precautions for user**  
Warning: Flammable solids, self-reactive substances and solid desensitised explosives  
Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

## 15 Regulatory information

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

**Product related hazard informations:**

**Hazard symbols:**

Xi Irritant  
F Highly flammable

**Risk phrases:**

11 Highly flammable.  
36/37/38 Irritating to eyes, respiratory system and skin.

**Safety phrases:**

16 Keep away from sources of ignition - No smoking.  
26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.  
37 Wear suitable gloves.

**National regulations**

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only.

Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List (NDSL).

**Information about limitation of use:** For use only by technically qualified individuals.

**Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

## 16 Other information:

The above information is believed to be correct but does not purport to be complete and should be used only as a guide. The burden of safe use of this material rests entirely with the user.

10/28/2013