

Safety Data Sheet

Bismuth

Issued: 11/12/2020
Version: 1.0.0**SECTION 1: Identification of the substance/preparation and of the company/undertaking****1.1. Product identifier**

Trade name: Bismuth
Substance name: bismuth-
CAS No: 7440-69-9
EC No: 231-177-4

1.2. Relevant identified uses of the substance or mixture and uses advised against

Recommended uses: Production of alloys.

1.3. Details of the supplier of the safety data sheet**Supplier**

Company: Boliden Bergsøe A/S
Address: Hvissingevej 116
Zip code: 2600
City: Glostrup
Country: DENMARK
E-mail: metal.glostrup@boliden.com
Phone: +45 43268300
Fax: +45 43268301

1.4. Emergency Telephone Number

+45 43 26 83 00 (company)

SECTION 2: Hazards identification**2.1. Classification of the substance or mixture**

CLP-classification: The product shall not be classified as hazardous according to the classification and labeling rules for substance and mixtures.

Most serious harmful effects: May irritate the skin - may cause reddening. May cause eye irritation.

2.2. Label elements

The product shall not be classified as hazardous according to the classification and labeling rules for substance and mixtures.

2.3. Other hazards

PBT/vPvB: No assessment required, as the product contains inorganic matter only.

SECTION 3: Composition/information on ingredients**3.1. Substances**

| Substance | CAS No | EC No | REACH Reg. No. | Concentration | Notes | CLP-classification |
|-----------|-----------|-----------|----------------|---------------|-------|--------------------|
| bismuth- | 7440-69-9 | 231-177-4 | | ≥ 95% | | |

Please see section 16 for the full text of H-phrases.

Safety Data Sheet Bismuth

Issued: 11/12/2020
Version: 1.0.0

SECTION 4: First aid measures

4.1. Description of first aid measures

| | |
|----------------------|---|
| Inhalation: | Seek fresh air. Seek medical advice in case of persistent discomfort. |
| Ingestion: | Wash out mouth thoroughly and drink 1-2 glasses of water in small sips. Seek medical advice in case of discomfort. |
| Skin contact: | Remove contaminated clothing. Wash the skin thoroughly with water and continue washing for a long time. Seek medical advice in case of persistent discomfort. |
| Eye contact: | Flush with water (preferably using eye wash equipment) until irritation subsides. Seek medical advice if symptoms persist. |
| General: | When obtaining medical advice, show the safety data sheet or label. |

4.2. Most important symptoms and effects, both acute and delayed

May irritate the skin - may cause reddening. May cause eye irritation.

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptoms. No special immediate treatment required.

SECTION 5: Fire-fighting measures

5.1. Extinguishing media

| | |
|--|---|
| Suitable extinguishing media: | The product is not directly flammable. Choose extinguishing agents based on the surrounding fire. |
| Unsuitable extinguishing media: | Do not use water stream, as it may spread the fire. |

5.2. Special hazards arising from the substance or mixture

The product is not directly flammable. Avoid inhalation of vapour and fumes - seek fresh air.

5.3. Advice for fire-fighters

Wear Self-Contained Breathing Apparatus (SCBA) with a chemical protection suit only where personal (close) contact is likely.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

For non-emergency personnel: Wear safety goggles if there is a risk of eye splash. Provide good ventilation. Wear gloves.

For emergency responders: In addition to the above: Protective suit equivalent to EN 368, type 3, is recommended.

6.2. Environmental precautions

Prevent spillage from entering drains and/or surface water.

6.3. Methods and material for containment and cleaning up

Sweep up/collect spills for possible reuse or transfer to suitable waste containers.

6.4. Reference to other sections

See section 8 for type of protective equipment. See section 13 for instructions on disposal.

Safety Data Sheet Bismuth

Issued: 11/12/2020
Version: 1.0.0

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Work under effective process ventilation (e.g. local exhaust ventilation). Running water and eye wash equipment must be available. Wash hands before breaks, before using restroom facilities, and at the end of work.

7.2. Conditions for safe storage, including any incompatibilities

The product should be stored safely, out of reach of children and away from food, animal feeding stuffs, medicines, etc. Store in a cool, dry place.

7.3. Specific end use(s)

None.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limit: Contains no substances subject to reporting requirements

Legal basis: Commission Directive 2000/39/EC (Occupational Exposure Limits) as subsequently amended. Last amended by Commission Directive 2019/1831/EU. Directive 2004/37/EC (Exposure to carcinogens or mutagens at work) as subsequently amended. Last amended by Directive 2019/983/EU.

8.2. Exposure controls

Appropriate engineering controls: Wear the personal protective equipment specified below.

Personal protective equipment, eye/face protection: Wear safety goggles if there is a risk of eye splash.

Personal protective equipment, hand protection: Wear protective gloves which protect against contact and splashing from molten metal. Gloves must conform to EN 12477.

Personal protective equipment, respiratory protection: When heating/using the product without process ventilation, you must use respiratory equipment with B/P3 filter. Respiratory protection must conform to one of the following standards: EN 136/140/145.

Environmental exposure controls: Ensure compliance with local regulations for emissions.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

| Parameter | Value/unit |
|----------------------|---------------------------------|
| State | Solid substance |
| Colour | Grey |
| Odour | Odourless |
| Solubility | Solubility in water: 1,873 mg/l |
| Explosive properties | No data |
| Oxidising properties | Non-oxidising. |

| Parameter | Value/unit | Remarks |
|-----------------------|------------|---------|
| pH (solution for use) | No data | |
| pH (concentrate) | No data | |
| Melting point | No data | |

Safety Data Sheet

Bismuth

Issued: 11/12/2020
Version: 1.0.0

| | | |
|---|-----------|--------|
| Freezing point | No data | |
| Initial boiling point and boiling range | ≥ 1560 °C | |
| Flash Point | No data | |
| Evaporation rate | No data | |
| Flammability (solid, gas) | No data | |
| Flammability limits | No data | |
| Explosion limits | No data | |
| Vapour pressure | 1 mmHg | 1021°C |
| Vapour density | No data | |
| Relative density | 9.792 | |
| Partition coefficient n-octanol/water | No data | |
| Auto-ignition temperature | No data | |
| Decomposition temperature | No data | |
| Viscosity | No data | |
| Odour threshold | No data | |

9.2 Other information

Other Information: None.

SECTION 10: Stability and reactivity

10.1. Reactivity

No known data.

10.2. Chemical stability

The product is stable when used in accordance with the supplier's directions.

10.3. Possibility of hazardous reactions

None known.

10.4. Conditions to avoid

None known.

10.5. Incompatible materials

None known.

10.6. Hazardous decomposition products

None known.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity - oral

bismuth-, cas-no 7440-69-9

| Organism | Test Type | Exposure time | Value | Conclusion | Test method | Source |
|----------|-----------|---------------|-----------|------------|-------------|--------|
| Rat | LD50 | | 5000mg/kg | | | |

Ingestion may cause discomfort. The product does not have to be classified. Based on existing data, the classification criteria are deemed not to have been met.

Safety Data Sheet

Bismuth

Issued: 11/12/2020
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| | |
|---|---|
| Acute toxicity - dermal: | The product does not have to be classified. Test data are not available. |
| Acute toxicity - inhalation: | The product does not have to be classified. Test data are not available. |
| Skin corrosion/irritation: | May irritate the skin - may cause reddening. The product does not have to be classified. Test data are not available. |
| Serious eye damage/eye irritation: | May cause eye irritation. The product does not have to be classified. Test data are not available. |
| Respiratory sensitisation or skin sensitisation: | The product does not have to be classified. Test data are not available. |
| Germ cell mutagenicity: | The product does not have to be classified. Test data are not available. |
| Carcinogenic properties: | The product does not have to be classified. Test data are not available. |
| Reproductive toxicity: | The product does not have to be classified. Test data are not available. |
| Single STOT exposure: | The product does not have to be classified. Test data are not available. |
| Repeated STOT exposure: | The product does not have to be classified. Test data are not available. |
| Aspiration hazard: | The product does not have to be classified. Test data are not available. |
| Other toxicological effects: | None known. |

SECTION 12: Ecological information

12.1. Toxicity

The product does not have to be classified. Test data are not available.

12.2. Persistence and degradability

Test data are not available.

12.3. Bioaccumulative potential

Test data are not available.

12.4. Mobility in soil

Test data are not available.

12.5. Results of PBT and vPvB assessment

No assessment required, as the product contains inorganic matter only.

12.6. Other adverse effects

None known.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Safety Data Sheet

Bismuth

Issued: 11/12/2020
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Contact the local authorities.**Category of waste:** EWC code: Depends on line of business and use, for instance 02 01 10 waste metal**SECTION 14: Transport information**

| | | | |
|--|-----------------|-------------------------------------|-----------------|
| 14.1. UN-No.: | Not applicable. | 14.4. Packing group: | Not applicable. |
| 14.2. UN proper shipping name: | Not applicable. | 14.5. Environmental hazards: | Not applicable. |
| 14.3. Transport hazard class(es): | Not applicable. | | |

14.6. Special precautions for user

None.

14.7. Transport in bulk according to Annex II of MARPOL and the IBC Code

Not applicable.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****Special Provisions:**

None.

15.2. Chemical Safety Assessment**Other Information:**

Chemical safety assessment has not been performed.

SECTION 16: Other information**Version history and indication of changes**

| Version | Revision date | Responsible | Changes |
|---------|---------------|--------------------------|---------|
| 1.0.0 | 11/12/2020 | Bureau Veritas HSE / MPE | |

Abbreviations:PBT: Persistent, Bioaccumulative and Toxic
STOT: Specific Target Organ Toxicity
vPvB: Very Persistent and Very Bioaccumulative**Other Information:**

This safety data sheet has been prepared for and applies to this product only. It is based on our current knowledge and the information that the supplier was able to provide about the product at the time of preparation. The safety data sheet complies with applicable law on preparation of safety data sheets in accordance with 1907/2006/EC (REACH) as subsequently changed.

Training advice:

A thorough knowledge of this safety data sheet should be a prerequisite condition.

Classification method:

Calculation based on the hazards of the known components.

SDS is prepared by**Company:**

Bureau Veritas HSE Denmark A/S

Address:

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Safety Data Sheet **Bismuth**

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