

1. Identification of the substance / mixture and of the company / undertaking

1.1 Product identifier

Product 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

Identified use: Laboratory chemical

1.3 Details of the supplier of the safety data sheet

Company: NETZSCH-Gerätebau GmbH
Wittelsbacherstraße 42
95100 Selb / Germany

Customer service Phone: +49 9287 881-555

1.4 Emergency Phone: +49 9287 881-174 (during office hours)

Fax: +49 9287 881-505

E-mail Address: service@ngb.netzsch.com

2. Hazards identification

2.1 Classification of the substance or mixture

Classification according to Regulation (EC) No 1272/2008

none

2.2 Label elements

Labelling according to Regulation (EC) No 1272/2008

none

Hazard
pictograms:

Signalword:

Hazard statements: none

Precautionary statements: none

Additional information: -

2.3 Other hazards

All chemicals are potentially dangerous. Therefore they are to be handled exclusively by specially trained personnel and with the necessary care.

Results of PBT- und vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

3. Composition / information on ingredients

3.1 Chemical characterization:

Substances

CAS-No. Description: 7440-69-9 Bismuth

Identification number(s):

EC number: 231-177-4

Formula: Bi

Molar mass [g/mol]: 208.98

4. First aid measures

4.1 Description of first aid measures

General information: Remove/ change contaminated clothes. Show this safety data sheet to the attending physician.

After inhalation: When inhaling, remove the person into fresh air. Provide artificial respiration in case of respiratory arrest and consult a physician.

After skin contact: Wash off with soap and water. When ailments occur consult medical advice.

After eye contact: Rinse with water for at least 15 minutes and consult a physician.

After swallowing: Rinse mouth immediately and consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

No further relevant information available.

4.3 Indication of any immediate medical attention and special treatment needed

No further relevant information available.

5. Fire-Fighting measures

5.1 Extinguishing agents

Suitable extinguishing agents: Special powders for metal fire. Do NOT apply Water. Dry sand.

For safety reasons unsuitable extinguishing agents: Water
Foam

5.2 Special hazards arising from the substance or mixture

No further relevant information available.

In case of fire, the following can be released:

Bismuth oxide

5.3 Advice for firefighters

Protective equipment: In case of fire wear self-contained respiratory apparatus and full protective suit.

Additional information:

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Avoid dust formation.

6.2 Environmental precautions

Do not release into sewers / ground water or soil.

6.3 Methods and material for containment and cleaning up

Pick up mechanically.

Dispose the material according to regulations.

6.4 Reference to other sections

Information for safe handling is available in Section 7.

Information concerning personal protective equipment can be read through in Section 8.

Appropriate disposal is described in Section 13.

7. Handling and storage

7.1 Precautions for safe handling

Handling according to the national/ regional guidelines for laboratories.

Information about fire and explosion protection:

No special measures required.

7.2 Conditions for safe storage, including any incompatibilities

Requirements for safe storage, including any incompatibilities: LGK 4:1B: flammable, solid, hazardous substances.

Information about storage in one common storage facility: Store away from foodstuffs.

Further information about storage conditions: Store in a cool area.
Keep the container tightly closed.
Store in a dry area.

Recommended storage temperature: 20+/-5°C

7.3 Specific end use(s)

No further relevant information available.

8. Exposure controls / personal protection

Additional information about design of technical facilities: No additional data; refer to Section 7.

8.1 Control parameters

Ingredients with limit values that require monitoring at the workplace: none

Additional information: Limit values are to be observed according to national/ regional regulations.

8.2 Exposure controls

Personal protective equipment:

General protective and hygienic measures:

No eating, drinking, smoking and snuffing at the workplace.
Keep at distance to foodstuff, beverages or animal feed.
Remove soiled or soaked clothes.
Wash hands before breaks and at the end of work.
Avoid eye or skin contact.

Individual protection measures:

Body protection is to be selected depending on the concentration and quantity of hazardous substances on the individual workplace. The chemical resistance of body protection has to be clarified with the supplier.

Respiratory protection:

Necessary in case of dust formation: Filter P1.

Protection of hands:

Wear appropriate protection gloves (nitrile rubber).

Eye protection:

Tightly sealed goggles.

Body protection:

Protective work clothing.

9. Physical and chemical properties

9.1 Information on basic physical and chemical properties

General Information

<u>Appearance</u> Form: Colour:	Pieces Light grey
Odour:	Odourless
Odour threshold:	No data available.
pH-value:	No data available.
<u>Change in condition</u> Melting point / Melting range: Boiling point / Boiling range:	271°C 1560°C
Flash point:	No data available.
Flammability (solid, gaseous):	Not flammable.
Ignition temperature:	No data available.
Decomposition temperature:	No data available.
Self-igniting:	No data available.
Danger of explosion:	No danger of explosion.
<u>Explosion limits</u> Lower: Upper:	No data available. No data available.
Oxidizing properties:	No data available.
Vapour pressure:	< 0.1 hPa ³
Density at 20°C:	9.78 g/cm ³
Relative density:	No data available.
Vapour density:	No data available.
Evaporation rate:	No data available.
Solubility in / Miscibility with water:	Practically insoluble.
Partition coefficient (n-octanol / water):	No data available.
<u>Viskosity</u> Dynamic: Kinematic:	No data available. No data available.

9.2 Other information

No further relevant information available.

10. Stability and reactivity

10.1 Reactivity

10.2 Chemical stability

Thermal decomposition / conditions to be avoided:

No data available.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

No further relevant information available.

10.5 Incompatible materials

Oxidants, halogen, acids

10.6 Hazardous decomposition products

No data available.

11. Toxicological information

11.1 Information on toxicological effects

Acute toxicity

LD / LC50 values relevant
for classification:

Oral LD 50= 2000mg/kg / rat (OECD test guideline 401)

Potential health effects

Skin:	No information available.
Eyes:	No information available.
Inhalation:	Adverse health effects only when intense contact with dust.
Ingestion	No information available.
Sensitization:	No sensitizing effects are known.

CMR effects

Germ cell mutagenicity:	No information available.
Carcinogenicity:	No information available.
Reproductive toxicity:	No information available.

Aspiration hazard:

No information available.

Specific target organ toxicity – single exposure:

The substance or mixture is not classified as specific target organ toxicant, single exposure.

Specific target organ toxicity – repeated exposure:

The substance or mixture is not classified as specific target organ toxicant, repeated exposure.

Additional toxicological information:

As far as our experience goes, when properly handled according to the intended use this product has no adverse health effects. Dermatitis, kidney and liver damage when constant burden.

Further information:

The product should be handled with the usual care as necessary for chemicals.

12. Ecological information

12.1 Toxicity

Aquatic toxicity

Fish toxicity			
EC ₅₀ (static)	Daphnia magna (large cladoceran) 100 mg/l – 48h		

(OECD-test guideline 202)

12.2 Persistence and degradability

Persistence: No further relevant information available.

Degradability: No further relevant information available.

12.3 Bioaccumulative potential

No further relevant information available.

12.4 Mobility in soil

No further relevant information available.

Ecotoxicological effects

Remark:

12.5 Results of PBT and vPvB assessment

PBT: Not applicable.

vPvB: Not applicable.

12.6 Other adverse effects

No further relevant information available.

13. Disposal considerations

13.1 Waste treatment methods

Recommendation: Dispose of residual amounts and non-reusable solutions in accordance with local legal regulations. Waste codes are to be assigned by the operator according to the respective application of the product.

Uncleaned packaging

Recommendation: Disposal same as for unused product.

14. Transport information

	ADR	IMDG	IATA
14.1 UN-Number	none	none	none
14.2 UN proper shipping name	none	none	none
14.3 Transport hazard class(es) / -label			
14.4 Packing group:	none	none	none
Transport hazard class(es):	none	none	none
Label:	none	none	none
Danger symbol:			
14.5 Environmental hazards:	no	no	no

14.6 Special precautions for user

Not applicable.

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

The cargo is not intended to be carried in bulk.

15. Regulatory information

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

National regulations:

Information about limitation of use: Employment restrictions concerning juveniles must be observed.

Waterhazard class: Generally not hazardous for water.

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

16. Other Information

Guarantee

This information has been compiled to the best of our knowledge; however, we make no claim as to its completeness and it is meant to serve only as a guideline. NETZSCH-Gerätebau GmbH disclaims any liability for damages which may occur in handling or in contact with these chemicals.

Disclaimer

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