# BISMUTH SUBNITRATE AR MSDS

## MATERIAL SAFETY DATA SHEET (MSDS)

### SECTION 1: Identification of the substance/mixture and of the company/undertaking

<table>
<thead>
<tr>
<th>1.1.</th>
<th>Product identifier</th>
</tr>
</thead>
<tbody>
<tr>
<td>Product form:</td>
<td>Substance</td>
</tr>
<tr>
<td>CAS-No.:</td>
<td>10361-46-3</td>
</tr>
<tr>
<td>Product code:</td>
<td>02161</td>
</tr>
<tr>
<td>Chemical structure:</td>
<td>( \text{Bi}_5\text{O}(\text{OH})_9(\text{NO}_3)_4 )</td>
</tr>
<tr>
<td>Synonyms:</td>
<td>Bismuth(III) nitrate basic / Bismuthyl nitrate / Bismuth oxynitrate</td>
</tr>
</tbody>
</table>

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

#### 1.2.1. Relevant identified uses

Use of the substance/mixture: Laboratory chemicals, Manufacture of substances

#### 1.2.2. Uses advised against

No additional information available

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

LOBA CHEMIE PVT.LTD.
107 Wode House Road, Jehangir Villa, Colaba
400005 Mumbai - INDIA
T +91 22 6663 6663 - F +91 22 6663 6699
info@lobachemie.com - www.lobachemie.com

### 1.4. Emergency telephone number

Emergency number: + 91 22 6663 6663 (9:00am - 6:00 pm)

### SECTION 2: Hazards identification

#### 2.1. Classification of the substance or mixture

**Classification according to Regulation (EC) No. 1272/2008 [CLP]**

- Oxidising Solids, Category 2: H272
- Skin corrosion/irritation, Category 2: H315
- Serious eye damage/eye irritation, Category 2: H319
- Specific target organ toxicity — Single exposure, Category 3: H335
- Respiratory tract irritation

Full text of H statements: see section 16
Classification according to Directive 67/548/EEC [DSD] or 1999/45/EC [DPD]
O: R8
Xi: R36
Xi: R37
Xi: R38
Full text of R-phrases: see section 16

Adverse physicochemical, human health and environmental effects
No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]
Hazard pictograms (CLP): GHS03 GHS07

Signal word (CLP): Danger
Hazard statements (CLP): H272 - May intensify fire; oxidiser.
H315 - Causes skin irritation.
H319 - Causes serious eye irritation.
H335 - May cause respiratory irritation.

Precautionary statements (CLP): P220 - Keep/Store away from clothing, combustible materials.
P261 - Avoid breathing vapours, dust, fume, gas.
P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

2.3. Other hazards
No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Name: BISMUTH SUBNITRATE AR
CAS-No.: 10361-46-3

Full text of R- and H-statements: see section 16

3.2. Mixtures
Not applicable

SECTION 4: First aid measures

4.1. Description of first aid measures
First-aid measures after inhalation: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
First-aid measures after skin contact: Wash with plenty of water/…. Wash contaminated clothing before reuse. Get medical advice/attention.

First-aid measures after eye contact: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical advice/attention.

First-aid measures after ingestion: Rinse mouth. Do not induce vomiting.

4.2. Most important symptoms and effects, both acute and delayed
Symptoms/effects after inhalation: May cause respiratory irritation.
Symptoms/effects after skin contact: Causes skin irritation.
Symptoms/effects after eye contact: Causes serious eye irritation.

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

SECTION 5: Firefighting measures

5.1. Extinguishing media
Unsuitable extinguishing media: Do not use a heavy water stream.

5.2. Special hazards arising from the substance or mixture
Fire hazard: May intensify fire; oxidiser.
Explosion hazard: Explosive; fire, blast or projection hazard.

5.3. Advice for firefighters
Protection during firefighting: Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
6.1.1. For non-emergency personnel
Emergency procedures: Evacuate unnecessary personnel.

6.1.2. For emergency responders
Protective equipment: Use personal protective equipment as required.
Emergency procedures: Ventilate area.

6.2. Environmental precautions
Avoid release to the environment.

6.3. Methods and material for containment and cleaning up
Methods for cleaning up: Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. On land, sweep or shovel into suitable containers.

6.4. Reference to other sections
No additional information available

SECTION 7: Handling and storage

7.1. Precautions for safe handling
Precautions for safe handling: Avoid contact with skin and eyes. Use only outdoors or in a well-ventilated area. Do not breathe vapours.
Hygiene measures: Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

7.2. Conditions for safe storage, including any incompatibilities
Storage conditions: Keep container tightly closed. Store in a well-ventilated place.
7.3. Specific end use(s)
No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters
No additional information available

8.2. Exposure controls
Hand protection: Protective gloves
Eye protection: Chemical goggles or safety glasses
Skin and body protection: Wear suitable protective clothing
Respiratory protection: [In case of inadequate ventilation] wear respiratory protection.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties
Physical state: Solid
Molecular mass: 286.98 g/mol
Colour: White powder.
Odour: Odourless.
Odour threshold: No data available
pH: No data available
Relative evaporation rate (butylacetate=1): No data available
Melting point: 500 °C
Freezing point: No data available
Boiling point: No data available
Flash point: No data available
Auto-ignition temperature: No data available
Decomposition temperature: No data available
Flammability (solid, gas): No data available
Vapour pressure: No data available
Relative vapour density at 20 °C: No data available
Relative density: No data available
Density: 4.928 g/cm³
Solubility: Water: Insoluble in water
Log Pow: No data available
Viscosity, kinematic : No data available
Viscosity, dynamic : No data available
Explosive properties : No data available
Oxidising properties : No data available
Explosive limits : No data available

9.2. Other information
No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity
No additional information available

10.2. Chemical stability
Stable under normal conditions.

10.3. Possibility of hazardous reactions
No additional information available

10.4. Conditions to avoid
Air contact. Direct sunlight. Moisture.

10.5. Incompatible materials
No additional information available

10.6. Hazardous decomposition products
No additional information available

SECTION 11: Toxicological information

11.1. Information on toxicological effects
Acute toxicity : Not classified

Skin corrosion/irritation : Causes skin irritation.
Serious eye damage/irritation : Causes serious eye irritation.
Respiratory or skin sensitisation : Not classified
Germ cell mutagenicity : Not classified
Carcinogenicity : Not classified

Reproductive toxicity : Not classified
STOT-single exposure : May cause respiratory irritation.

STOT-repeated exposure : Not classified
Aspiration hazard : Not classified
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SECTION 12: Ecological information

12.1. Toxicity
No additional information available

12.2. Persistence and degradability
No additional information available

12.3. Bioaccumulative potential
No additional information available

12.4. Mobility in soil
No additional information available

12.5. Results of PBT and vPvB assessment
No additional information available

12.6. Other adverse effects
No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods
No additional information available

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number
UN-No. (ADR) : 1477
UN-No. (IMDG) : 1477
UN-No. (IATA) : 1477
UN-No. (ADN) : 1477
UN-No. (RID) : 1477

14.2. UN proper shipping name
Proper Shipping Name (ADR) : NITRATES, INORGANIC, N.O.S.
Proper Shipping Name (IMDG) : NITRATES, INORGANIC, N.O.S.
Proper Shipping Name (IATA) : Nitrates, inorganic, n.o.s.
Proper Shipping Name (ADN) : NITRATES, INORGANIC, N.O.S.
Proper Shipping Name (RID) : NITRATES, INORGANIC, N.O.S.
Transport document description (ADR) : UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II, (E)
Transport document description (IMDG) : UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II
Transport document description (IATA) : UN 1477 Nitrates, inorganic, n.o.s., 5.1, II
Transport document description (ADN) : UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II
Transport document description (RID) : UN 1477 NITRATES, INORGANIC, N.O.S., 5.1, II

14.3. Transport hazard class(es)
ADR
## Transport hazard class(es) (ADR)
- : 5.1

## Danger labels (ADR)
- : 5.1

## IMDG
### Transport hazard class(es) (IMDG)
- : 5.1

### Danger labels (IMDG)
- : 5.1

## IATA
### Transport hazard class(es) (IATA)
- : 5.1

### Hazard labels (IATA)
- : 5.1

## ADN
### Transport hazard class(es) (ADN)
- : 5.1

### Danger labels (ADN)
- : 5.1

## RID
### Transport hazard class(es) (RID)
- : 5.1

### Danger labels (RID)
- : 5.1

### Packing group
- Packing group (ADR): II
- Packing group (IMDG): II
- Packing group (IATA): II
- Packing group (ADN): II
- Packing group (RID): II

### Environmental hazards
- Dangerous for the environment: No
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- Overland transport
  Classification code (ADR) : O2
  Special provisions (ADR) : 511
  Limited quantities (ADR) : 1kg
  Excepted quantities (ADR) : E2
  Packing instructions (ADR) : P002, IBC08
  Special packing provisions (ADR) : B4
  Mixed packing provisions (ADR) : MP10
  Portable tank and bulk container instructions (ADR) : T3
  Portable tank and bulk container special provisions (ADR) : TP33
  Tank code (ADR) : SGAN
  Tank special provisions (ADR) : TU3
  Vehicle for tank carriage : AT
  Transport category (ADR) : 2
  Special provisions for carriage - Packages (ADR) : V11
  Special provisions for carriage - Loading, unloading and handling (ADR) : CV24
  Hazard identification number (Kemler No.) : 50
  Orange plates : 

  Tunnel restriction code (ADR) : E
  EAC code : 1Y

- Transport by sea
  Limited quantities (IMDG) : 1 kg
  Excepted quantities (IMDG) : E2
  Packing instructions (IMDG) : P002
  IBC packing instructions (IMDG) : IBC08
  IBC special provisions (IMDG) : B21, B4
  Tank instructions (IMDG) : T3
  Tank special provisions (IMDG) : TP33
  EmS-No. (Fire) : F-A
  EmS-No. (Spillage) : S-Q
  Stowage category (IMDG) : A
  Segregation (IMDG) : SG38, SG49
  Properties and observations (IMDG) : Solids. Solid mixtures with combustible material are readily ignited and may burn fiercely. Harmful if swallowed.
  MFAG-No : 140

- Air transport
  PCA Excepted quantities (IATA) : E2
  PCA Limited quantities (IATA) : Y544
  PCA limited quantity max net quantity (IATA) : 2.5kg
  PCA packing instructions (IATA) : 558
  PCA max net quantity (IATA) : 5kg
## BISMUTH SUBNITRATE AR

### Safety Data Sheet

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>CAO packing instructions (IATA)</td>
<td>562</td>
</tr>
<tr>
<td>CAO max net quantity (IATA)</td>
<td>25kg</td>
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<tr>
<td>Special provisions (IATA)</td>
<td>A3, A803</td>
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<td>ERG code (IATA)</td>
<td>5L</td>
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### Inland waterway transport

<table>
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<td>Classification code (ADN)</td>
<td>O2</td>
</tr>
<tr>
<td>Special provisions (ADN)</td>
<td>511</td>
</tr>
<tr>
<td>Limited quantities (ADN)</td>
<td>1 kg</td>
</tr>
<tr>
<td>Excepted quantities (ADN)</td>
<td>E2</td>
</tr>
<tr>
<td>Equipment required (ADN)</td>
<td>PP</td>
</tr>
<tr>
<td>Number of blue cones/lights (ADN)</td>
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</tr>
</tbody>
</table>

### Rail transport

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Classification code (RID)</td>
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<tr>
<td>Special provisions (RID)</td>
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<tr>
<td>Excepted quantities (RID)</td>
<td>E2</td>
</tr>
<tr>
<td>Packing instructions (RID)</td>
<td>P002, IBC08</td>
</tr>
<tr>
<td>Special packing provisions (RID)</td>
<td>B4</td>
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<tr>
<td>Portable tank and bulk container instructions (RID)</td>
<td>MP10</td>
</tr>
<tr>
<td>Portable tank and bulk container special provisions (RID)</td>
<td>TP33</td>
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<tr>
<td>Tank codes for RID tanks (RID)</td>
<td>SGAN</td>
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<tr>
<td>Special provisions for RID tanks (RID)</td>
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<tr>
<td>Transport category (RID)</td>
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<tr>
<td>Special provisions for carriage – Packages (RID)</td>
<td>W11</td>
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<tr>
<td>Special provisions for carriage - Loading, unloading and handling (RID)</td>
<td>CW24</td>
</tr>
<tr>
<td>Colis express (express parcels) (RID)</td>
<td>CE10</td>
</tr>
<tr>
<td>Hazard identification number (RID)</td>
<td>50</td>
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</tbody>
</table>

### Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

### SECTION 15: Regulatory information

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

##### 15.1.1. EU-Regulations

No REACH Annex XVII restrictions

BISMUTH SUBNITRATE AR is not on the REACH Candidate List

BISMUTH SUBNITRATE AR is not on the REACH Annex XIV List

##### 15.1.2. National regulations

**Germany**
### BISMUTH SUBNITRATE AR

#### Safety Data Sheet


**Netherlands**

<table>
<thead>
<tr>
<th>List Description</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>SZW-lijst van kankerverwekkende stoffen</td>
<td>The substance is not listed</td>
</tr>
<tr>
<td>SZW-lijst van mutagene stoffen</td>
<td>The substance is not listed</td>
</tr>
<tr>
<td>NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding</td>
<td>The substance is not listed</td>
</tr>
<tr>
<td>NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid</td>
<td>The substance is not listed</td>
</tr>
<tr>
<td>NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling</td>
<td>The substance is not listed</td>
</tr>
</tbody>
</table>

**Denmark**

Recommendations Danish Regulation: Young people below the age of 18 years are not allowed to use the product

### 15.2. Chemical safety assessment

No additional information available

### SECTION 16: Other information

Full text of R-, H- and EUH-statements:

<table>
<thead>
<tr>
<th>R-number</th>
<th>EUH Statement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eye Irrit. 2</td>
<td>Serious eye damage/eye irritation, Category 2</td>
</tr>
<tr>
<td>Ox. Sol. 2</td>
<td>Oxidising Solids, Category 2</td>
</tr>
<tr>
<td>Skin Irrit. 2</td>
<td>Skin corrosion/irritation, Category 2</td>
</tr>
<tr>
<td>STOT SE 3</td>
<td>Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation</td>
</tr>
<tr>
<td>H272</td>
<td>May intensify fire; oxidiser.</td>
</tr>
<tr>
<td>H315</td>
<td>Causes skin irritation.</td>
</tr>
<tr>
<td>H319</td>
<td>Causes serious eye irritation.</td>
</tr>
<tr>
<td>H335</td>
<td>May cause respiratory irritation.</td>
</tr>
<tr>
<td>R36</td>
<td>Irritating to eyes</td>
</tr>
<tr>
<td>R37</td>
<td>Irritating to respiratory system</td>
</tr>
<tr>
<td>R38</td>
<td>Irritating to skin</td>
</tr>
<tr>
<td>R8</td>
<td>Contact with combustible material may cause fire</td>
</tr>
<tr>
<td>O</td>
<td>Oxidising</td>
</tr>
<tr>
<td>Xi</td>
<td>Irritant</td>
</tr>
</tbody>
</table>

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product.