

### MATERIAL SAFETY DATA SHEET (MSDS)

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

##### 1.1. Product identifier

Product form : Substance  
:  
CAS-No. : 10035-06-0  
Product code : 02131  
Chemical structure :  $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$

##### 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

SPAN LAB  
UNIT NO. 14, SKY INDUSTRIAL ESTATE, WALIV, VASAI (E)  
401208 Mumbai - INDIA  
PH: +91 9820509929  
[info@spanlab.in](mailto:info@spanlab.in) [www.spanlab.in](http://www.spanlab.in)

#### SECTION 2: Hazards identification

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

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

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

Full text of H statements : see section 16

# BISMUTH NITRATE PENTAHYDRATE AR

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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, spray.  
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 NITRATE PENTAHYDRATE AR  
CAS-No. : 10035-06-0

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.

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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

Suitable extinguishing media	: Carbon dioxide. Dry powder. Foam. Water spray.
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	: May cause fire or explosion; strong oxidiser.

### 5.3. Advice for firefighters

Protection during firefighting	: Do not enter fire area without proper protective equipment, including respiratory protection.
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## 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.
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#### 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.
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### 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. Provide good ventilation in process area to prevent formation of vapour.
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.
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### 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
Colour	: white.
Odour	: slight nitric acid odor.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: 30 °C
Freezing point	: No data available
Boiling point	: 75 - 80 °C
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	: 2.83 g/cm <sup>3</sup>
Solubility	: Water: Slowly decomposes in water to form subnitrate
Log Pow	: No data available
Viscosity, kinematic	: No data available

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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

Moisture. Direct sunlight.

### 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

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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



#### 14.4. Packing group

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

#### 14.5. Environmental hazards

Dangerous for the environment : No

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Marine pollutant	: No
Other information	: No supplementary information available

### 14.6. Special precautions for user

#### - 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



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CAO packing instructions (IATA)	: 562
CAO max net quantity (IATA)	: 25kg
Special provisions (IATA)	: A3, A803
ERG code (IATA)	: 5L

### - Inland waterway transport

Classification code (ADN)	: O2
Special provisions (ADN)	: 511
Limited quantities (ADN)	: 1 kg
Excepted quantities (ADN)	: E2
Equipment required (ADN)	: PP
Number of blue cones/lights (ADN)	: 0

### - Rail transport

Classification code (RID)	: O2
Special provisions (RID)	: 511
Excepted quantities (RID)	: E2
Packing instructions (RID)	: P002, IBC08
Special packing provisions (RID)	: B4
Mixed packing provisions (RID)	: MP10
Portable tank and bulk container instructions (RID)	: T3
Portable tank and bulk container special provisions (RID)	: TP33
Tank codes for RID tanks (RID)	: SGAN
Special provisions for RID tanks (RID)	: TU3
Transport category (RID)	: 2
Special provisions for carriage – Packages (RID)	: W11
Special provisions for carriage - Loading, unloading and handling (RID)	: CW24
Colis express (express parcels) (RID)	: CE10
Hazard identification number (RID)	: 50

### 14.7. 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 NITRATE PENTAHYDRATE AR is not on the REACH Candidate List

BISMUTH NITRATE PENTAHYDRATE AR is not on the REACH Annex XIV List

#### 15.1.2. National regulations

#### Germany

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Reference to AwSV : Water hazard class (WGK) 2, significant hazard to water (Classification according to AwSV; ID No. 2108)

12th Ordinance Implementing the Federal Immission Control Act - 12.BImSchV : Is not subject of the 12. BImSchV (Hazardous Incident Ordinance)

### Netherlands

SZW-lijst van kankerverwekkende stoffen : The substance is not listed

SZW-lijst van mutagene stoffen : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Borstvoeding : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Vruchtbaarheid : The substance is not listed

NIET-limitatieve lijst van voor de voortplanting giftige stoffen – Ontwikkeling : The substance is not listed

### 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:

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

*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*