

Bismuth(III) nitrate.5aq v.p.

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830
Date of issue: 10/31/2018 Version: 1.0

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

1.1. Product identifier

Product form	: Substance
Trade name	: Bismuth(III) nitrate.5aq v.p.
CAS-No.	: 10035-06-0
Product code	: CL00.0228
Type of product	: Pure substance, Hygroscopic substance. Preventive measures apply to the substance in dry state only
Formula	: $\text{Bi}(\text{NO}_3)_3 \cdot 5\text{H}_2\text{O}$
Synonyms	: bismuthnitrate, pentahydrate / bismuthtrinitrate, pentahydrate / bismuthtrinitrate, pentahydrate / nitric acid, bismuth(3+) salt, pentahydrate

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 chemical

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Chem-Lab nv
Industriezone "De Arend" 2
Zedelgem - Belgium
T +32 50 288320
info@chem-lab.be - www.chem-lab.be

1.4. Emergency telephone number

Emergency number : +32 50 28 83 20

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
Full text of H statements : 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.
Precautionary statements (CLP)	: P220 - Keep away from clothing and other combustible materials. P261 - Avoid breathing dust/fume/gas/mist/vapours/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

Substance type : Mono-constituent

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Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Bismuth(III) nitrate.5aq v.p.	(CAS-No.) 10035-06-0	100	Ox. Sol. 2, H272 Skin Irrit. 2, H315 Eye Irrit. 2, H319

Full text of 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 general	: Check the vital functions. Unconscious: maintain adequate airway and respiration. Respiratory arrest: artificial respiration or oxygen. Cardiac arrest: perform resuscitation. Victim conscious with laboured breathing: half-seated. Victim in shock: on his back with legs slightly raised. Vomiting: prevent asphyxia/aspiration pneumonia. Prevent cooling by covering the victim (no warming up). Keep watching the victim. Give psychological aid. Keep the victim calm, avoid physical strain. Depending on the victim's condition: doctor/hospital.
First-aid measures after inhalation	: Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service.
First-aid measures after skin contact	: Wash immediately with lots of water. Do not apply (chemical) neutralizing agents. Take victim to a doctor if irritation persists.
First-aid measures after eye contact	: Rinse immediately with plenty of water. Remove contact lenses, if present and easy to do. Continue rinsing. Do not apply neutralizing agents. Take victim to an ophthalmologist if irritation persists.
First-aid measures after ingestion	: Rinse mouth with water. Victim is fully conscious: immediately induce vomiting. Induce vomiting by giving a 0.9 % saline solution. Call Poison Information Centre (www.big.be/antigif.htm). Consult a doctor/medical service if you feel unwell. Ingestion of large quantities: immediately to hospital.

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

Symptoms/effects after skin contact	: Tingling/irritation of the skin. Methemoglobinemia.
Symptoms/effects after eye contact	: Irritation of the eye tissue.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media	: Adapt extinguishing media to the environment for surrounding fires.
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5.2. Special hazards arising from the substance or mixture

Fire hazard	: DIRECT FIRE HAZARD: Non combustible. INDIRECT FIRE HAZARD: May intensify fire; oxidiser. Reactions involving a fire hazard: see "Reactivity Hazard".
Hazardous decomposition products in case of fire	: On heating/burning: release of toxic and corrosive gases/vapours (nitrous vapours).

5.3. Advice for firefighters

Precautionary measures fire	: Exposure to fire/heat: keep upwind. Exposure to fire/heat: consider evacuation. Exposure to fire/heat: have neighbourhood close doors and windows.
Firefighting instructions	: Dilute toxic gases with water spray.
Protection during firefighting	: Heat/fire exposure: compressed air/oxygen apparatus.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Gloves. Face-shield. Protective clothing. Dust cloud production: compressed air/oxygen apparatus. Dust cloud production: dust-tight suit.
Emergency procedures	: Mark the danger area. Prevent dust cloud formation. No naked flames. Wash contaminated clothes.
Measures in case of dust release	: In case of dust production: keep upwind. Dust production: have neighbourhood close doors and windows.

6.1.2. For emergency responders

No additional information available

6.2. Environmental precautions

Prevent spreading in sewers.

6.3. Methods and material for containment and cleaning up

For containment	: Contain released product, pump into suitable containers. Plug the leak, cut off the supply. Dam up the solid spill.
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Methods for cleaning up	: Prevent dispersion by covering with dry sand/earth. Scoop solid spill into closing containers. Carefully collect the spill/leftovers. Spill must not return in its original container. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling.
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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 raising dust. Keep away from naked flames/heat. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Keep the substance free from contamination. Thoroughly clean/dry the installation before use. Do not discharge the waste into the drain. Keep container tightly closed.
Hygiene measures	: Reduce/avoid exposure and/or contact.

7.2. Conditions for safe storage, including any incompatibilities

Heat and ignition sources	: KEEP SUBSTANCE AWAY FROM: heat sources.
Information on mixed storage	: KEEP SUBSTANCE AWAY FROM: combustible materials. water/moisture.
Storage area	: Store in a cool area. Store in a dry area. Keep only in the original container. Meet the legal requirements.
Special rules on packaging	: SPECIAL REQUIREMENTS: closing. watertight. dry. clean. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	: SUITABLE MATERIAL: glass. synthetic material.

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

Materials for protective clothing:
GIVE GOOD RESISTANCE: neoprene
Hand protection:
Gloves
Eye protection:
Face shield. In case of dust production: protective goggles
Skin and body protection:
Protective clothing. In case of dust production: head/neck protection. In case of dust production: dustproof clothing
Respiratory protection:
Dust production: dust mask with filter type P2

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Solid
Appearance	: Crystalline solid.
Molecular mass	: 485.07 g/mol
Colour	: Colourless.
Odour	: Irritating/pungent odour.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: No data available
Freezing point	: No data available
Boiling point	: No data available
Flash point	: No data available
Auto-ignition temperature	: No data available
Decomposition temperature	: 80 °C
Flammability (solid, gas)	: No data available

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Vapour pressure	: No data available
Relative vapour density at 20 °C	: Not applicable
Relative density	: 2.8
Density	: 2830 kg/m³
Solubility	: Decomposes on exposure to water. Soluble in organic solvents.
Log Pow	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: No data available
Explosive properties	: No data available
Oxidising properties	: May intensify fire; oxidiser.
Explosive limits	: No data available

9.2. Other information

VOC content	: 0 %
Other properties	: Hygroscopic. Acid reaction.

SECTION 10: Stability and reactivity

10.1. Reactivity

Decomposes on exposure to water (moisture): (increased) risk of fire.

10.2. Chemical stability

Unstable on exposure to heat. Unstable on exposure to moisture.

10.3. Possibility of hazardous reactions

No additional information available

10.4. Conditions to avoid

No additional information available

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 (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: 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	: Not classified
STOT-repeated exposure	: Not classified
Aspiration hazard	: Not classified
Potential adverse human health effects and symptoms	: Causes skin irritation. Causes serious eye irritation.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Not classified as dangerous for the environment according to the criteria of Regulation (EC) No 1272/2008.
Ecology - air	: Not classified as dangerous for the ozone layer (Regulation (EC) No 1005/2009).
Ecology - water	: May cause eutrophication. Insufficient data available on ecotoxicity. pH shift.
Acute aquatic toxicity	: Not classified
Chronic aquatic toxicity	: Not classified

12.2. Persistence and degradability

Bismuth(III) nitrate.5aq v.p. (10035-06-0)	
Persistence and degradability	Biodegradability: not applicable.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable

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ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

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Bioaccumulative potential	No bioaccumulation data available.
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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






Product/Packaging disposal recommendations : Do not discharge into surface water. Remove waste in accordance with local and/or national regulations. Hazardous waste shall not be mixed together with other waste. Different types of hazardous waste shall not be mixed together if this may entail a risk of pollution or create problems for the further management of the waste. Hazardous waste shall be managed responsibly. All entities that store, transport or handle hazardous waste shall take the necessary measures to prevent risks of pollution or damage to people or animals. Recycle/reuse.

Additional information : Hazardous waste according to Directive 2008/98/EC, as amended by Regulation (EU) No 1357/2014 and Regulation (EU) No 2017/997.

European List of Waste (LoW) code : 15 01 10* - packaging containing residues of or contaminated by dangerous substances
16 03 03* - inorganic wastes containing dangerous substances

SECTION 14: Transport information

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

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
1477	1477	1477	1477	1477
14.2. UN proper shipping name				
Nitrates, inorganic, n.o.s.	Nitrates, inorganic, n.o.s.	Nitrates, inorganic, n.o.s.	Nitrates, inorganic, n.o.s.	Nitrates, inorganic, n.o.s.
Transport document description				
UN 1477 Nitrates, inorganic, n.o.s., 5.1, II, (E)	UN 1477 Nitrates, inorganic, n.o.s., 5.1, II	UN 1477 Nitrates, inorganic, n.o.s., 5.1, II	UN 1477 Nitrates, inorganic, n.o.s., 5.1, II	UN 1477 Nitrates, inorganic, n.o.s., 5.1, II
14.3. Transport hazard class(es)				
5.1	5.1	5.1	5.1	5.1
				
14.4. Packing group				
II	II	II	II	II
14.5. Environmental hazards				
Dangerous for the environment : No	Dangerous for the environment : No Marine pollutant : No	Dangerous for the environment : No	Dangerous for the environment : No	Dangerous for the environment : No
No supplementary information available				

14.6. Special precautions for user

Overland transport

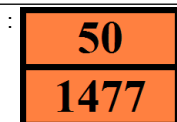
Transport regulations (ADR) : Subject to the provisions
Classification code (ADR) : O2
Hazard identification number (Kemler No.) : 50

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Orange plates



Tunnel restriction code (ADR)

: E

EAC code

: 1Y

Transport by sea

Transport regulations (IMDG)

: Subject to the provisions

EmS-No. (Fire)

: F-A

EmS-No. (Spillage)

: S-Q

Air transport

Transport regulations (IATA)

: Subject to the provisions

Inland waterway transport

Classification code (ADN)

: O2

Rail transport

Transport regulations (RID)

: Subject to the provisions

Classification code (RID)

: O2

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Bismuth(III) nitrate.5aq v.p. is not on the REACH Candidate List

Bismuth(III) nitrate.5aq v.p. is not on the REACH Annex XIV List

VOC content

: 0 %

Directive 2012/18/EU (SEVESO III)

15.1.2. National regulations

Germany

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

15.2. Chemical safety assessment

No additional information available

SECTION 16: Other information

Full text of 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
H272	May intensify fire; oxidiser.
H315	Causes skin irritation.
H319	Causes serious eye irritation.

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SDS Zonder Big

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