

Revision: 2.1

Revision date:

16 April 2021

Date printed:

12 August 2023

Section 1. Identification

1.1 Product Identifier 1570

Product Name	BARIUM NITRATE pure
CAS Number	10022-31-8
REACH Registration No	A registration number is not available as the substance or its uses are exempt, the annual tonnage does not require a registration or the registration is envisaged for a later date.
Molecular Formula	Ba(NO ₃) ₂ = 261.34

1.2 Relevant identified uses of the substance or mixture & uses advised against

Uses of Material Chemical for industrial and laboratory use. Not suitable for domestic use.

1.3 Supplier Vickers Laboratories Ltd



Grangefield Industrial Estate
Richardshaw Road
Pudsey
West Yorkshire
LS28 6QW
UNITED KINGDOM

Phone 44 0113 2362811
Fax +44(0)113 2362703
Email safety@viclabs.co.uk
Website www.viclabs.co.uk

1.4 Emergency Telephone (08:00-16:30) +44(0) 113 2362811 (24hr) 112 (Have this document to hand)

Section 2. Hazards Identification

2.1 Classification of the substance or mixture

Classification according to regulation 1272/2008/EC

Oxidising solid, category 2	H272: May intensify fire; oxidizer.
Acute toxicity, category 3 (oral)	H301: Toxic if swallowed.
Acute toxicity, category 4 (inhalation)	H332: Harmful if inhaled.
Serious eye damage/irritation, category 2	H319: Causes serious eye irritation.

2.2 Label elements

Labelling according to regulation 1272/2008/EC

Signal word Danger

Hazard Pictograms



Hazard Statements May intensify fire; oxidizer. Toxic if swallowed. Harmful if inhaled. Causes serious eye irritation.

Precautionary Statements Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep / Store away from clothing / combustible materials. Take any precaution to avoid mixing with combustibles... Wear protective gloves / protective clothing / eye protection.

Section 3. Composition

3.1 Substances

Component	CAS No.	EEC No.	REACH No.	Conc w/w	CLP Classification (1272/2008/CE)
Barium nitrate	10022-31-8	233-020-5		>98%	Ox. Sol. 2, Acute Tox. 3 (O), Acute Tox. 4 (I), Eye Irrit. 2

Section 4. First Aid

4.1 Description of first aid measures

Eyes	Irrigate thoroughly with plenty of water for at least 10 minutes, holding the eye open. If discomfort persists OBTAIN MEDICAL ATTENTION.
Skin	Wash off skin thoroughly with water. Remove contaminated clothing immediately and wash before re-use.
Inhalation	Remove from exposure.
Ingestion	If conscious give plenty of water to drink. Keep warm and at rest. If there is difficulty in breathing give oxygen if available. If breathing stops or shows signs of failing, apply artificial resuscitation. OBTAIN MEDICAL ATTENTION URGENTLY.
Personal protection for first aiders	Wear protective gloves / eye protection.

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

No further relevant information available.

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

No further relevant information available.

Section 5. Fire Fighting

5.1 Extinguishing media

Extinguishing Media	Water spray.
Unsuitable Media	Nothing specified.

5.2 Special hazards arising from the substance or mixture

Hazards May evolve toxic fumes if involved in a fire. Mixtures with combustible materials are flammable.

5.3 Advice for firefighters

Advice for firefighters Evacuate area immediately. Keep up wind. Avoid exposure to toxic vapours and fumes. Fire-fighters should wear protective clothing and breathing apparatus.

Section 6. Accidental Release Measures

6.1 Personal precautions, protective equipment and emergency procedures

Personal Protection Presents no major hazards.

6.2 Environmental precautions

Environmental Keep material out of sewers, storm drains, surface waters and soil. Notify the Environmental Agency and local Environmental Health Officer if major spillage occurs.

6.3 Methods and material for containment and cleaning up

Major Spillage Shovel/sweep up into container for removal Wash area down with copious amounts of water.
Minor Spillage Wash area down with copious amounts of water.

6.4 Reference to other sections

See section 8.2 for information on protective equipment and section 13 for information on disposal.

Section 7. Storage & Handling

7.1 Precautions for safe handling

Avoid contact with skin and eyes. Do not breath dust. Do not allow to contaminate clothing.

7.2 Conditions for safe storage, including any incompatibilities

Well ventilated, cool, dry storage . Store in a suitable area for oxidising agents. Keep well separated from combustible materials.

7.3 Specific end use(s)

See section 1.2.

Section 8. Workplace Exposure & Personal Protection

8.1 Control parameters

Component	CAS No	Concentration	Workplace Exposure Limits	
			Long Term (8hr TWA)	Short Term 15min period
Barium nitrate	10022-31-8	>98%	-	-

Exposure data source(s) No occupational exposure data currently available.

8.2 Exposure controls

Respiratory Protection If process creates significant amounts of dust use L.E.V. or wear suitable dust mask.
Hand Protection Wear gloves.
Eye Protection Use tightly fitting chemical splash proof glasses or goggles.
Skin Protection Avoid contact with skin. If skin contact or contamination of clothing is likely, protective clothing must be worn.
Special Hazards No special precautions required.

Section 9. Physical & Chemical Properties

9.1 Information on basic physical and chemical properties

Appearance White deliquescent crystalline material.
Odour No specific odour.
pH 6 @ 20°C
Boiling Point Not available
Melting Point 592 °C
Flash Point Not applicable
Upper Flammable Limit Not applicable
Lower Flammable Limit Not applicable
Auto Ignition Not applicable
Explosive Properties No.
Oxidising Properties Yes.
Vapour Pressure Not applicable
Relative Density 3.24
Water Solubility 94 g/L

9.2 Other information

No data available.

Section 10. Stability & Reactivity

- | | | |
|------|------------------------------------|---|
| 10.1 | Reactivity | No data available. |
| 10.2 | Chemical Stability | Stable under normal conditions |
| 10.3 | Possibility of hazardous reactions | No data available. |
| 10.4 | Conditions to Avoid | Do not allow to impregnate wood or other organic materials. |
| 10.5 | Incompatible Materials | Combustible materials. Many organic compounds. |
| 10.6 | Hazardous Decomposition Products | Not flammable but will assist a fire, producing irritant and toxic fumes of oxides of nitrogen. |

Section 11. Toxicological Information

11.1 Information on toxicological effects

- | | |
|----------------------|---|
| Eyes | Contact with the solid or dust may be irritating to the eyes. |
| Skin | The solid and solutions may be irritating to the skin. |
| LD50 Skin | >2000 mg/Kg Rat |
| Ingestion | Low order of acute toxicity. |
| LD50 Oral | 50-300 mg/Kg Rat |
| Inhalation | Presents no significant health hazard by inhalation. |
| LD50 Inhalation | >1.1 mg/L Rat |
| TCLo | Not available |
| Carcinogenicity | No information is available. |
| Mutagenicity | No information is available. |
| Reproductive Effects | No information is available. |

Section 12. Ecological

- | | | |
|------|----------------------------------|---|
| 12.1 | Toxicity | Low levels are readily bio-degraded in the environment. Higher levels are toxic to marine and plant life. |
| | LC50 Algal | >30.1 mg/L Algae |
| | LC50 Crustacea | 14.5 mg/L Daphnia |
| | LC50 Fish | >3.5 mg/L Fish |
| 12.2 | Persistence and degradability | No data available. |
| 12.3 | Bioaccumulative potential | No data available. |
| 12.4 | Mobility in soil | No data available. |
| 12.5 | Results of PBT & vPvB assessment | Assessment not required. |
| 12.6 | Other adverse effects | None known at present. |

Section 13. Disposal Considerations

13.1 Waste treatment methods

- | | |
|------------------------|--------------------------------------|
| Disposal Methods | Do not dispose of as domestic waste. |
| Contaminated Packaging | Wash out containers with water. |

Section 14. Transport Information

14.1 UN Number	1446
14.2 Proper Shipping Name	Barium nitrate
14.3 Transport classes	
UN classification	5.1
Subsidiary hazard(s)	6.1
Transport category	2
ADR Hazard ID	56
Tunnel Restriction Code	E
14.4 Packing Group	II
14.5 Environment hazards	See section 12.
14.6 Special precautions for user	No special precautions required.
14.7 Transport in bulk	Not transported in bulk.



Section 15. Regulatory Information

15.1 Safety, health and environment regulations specific for substance/mixture.

Classification, Labeling & Packaging of Substances & Mixtures Regulations (1272/2008/CE)

Classification Oxidising solid, category 2; Acute toxicity, category 3 (oral); Acute toxicity, category 4 (inhalation); Serious eye damage/irritation, category 2

Signal word Danger

Hazard Pictograms



Hazard Statements H272, H301, H332, H319
May intensify fire; oxidizer. Toxic if swallowed. Harmful if inhaled. Causes serious eye irritation.

Precautionary Statements P210, P220, P221, P280
Keep away from heat / sparks/open flames/hot surfaces - No smoking. Keep / Store away from clothing / combustible materials. Take any precaution to avoid mixing with combustibles... Wear protective gloves / protective clothing / eye protection.

15.2 Chemical safety assessment

Assessment not required.

Section 16. Other Information

The information contained in this document only covers the hazards presented by this material, it DOES NOT constitute a workplace risk assessment. See sections 11 for toxicological information and section 12 for ecological information.

Revision number: 2.1 (Supersedes revision 2.0)

Revision date: 16 April 2021

Reviewed by chemist: 16 April 2021

Printed date: 12 August 2023

Copyright: 2023 Vickers Laboratories Ltd