

MATERIAL SAFETY DATA SHEET

Date Printed: 01/29/2004

Date Updated: 09/02/2002

Version 1.1

Section 1 - Product and Company Information

Product Name	BARIUM NITRATE, 99+%, A.C.S. REAGENT
Product Number	217581
Brand	ALDRICH
Company	Sigma-Aldrich
Street Address	3050 Spruce Street
City, State, Zip, Country	SAINT LOUIS MO 63103 US
Technical Phone:	314 771 5765
Emergency Phone:	414 273 3850 Ext. 5996
Fax:	800 325 5052

Section 2 - Composition/Information on Ingredient

Substance Name	CAS #	SARA 313
BARIUM NITRATE	10022-31-8	No
Formula	Ba(NO ₃) ₂	
Synonyms	Barium dinitrate * Dusicnan barnaty (Czech) * Nitrate de baryum (French) * Nitric acid, barium salt	
RTECS Number:	CQ9625000	

Section 3 - Hazards Identification

EMERGENCY OVERVIEW

Oxidizing. Toxic (USA) Harmful (EU).
Contact with combustible material may cause fire. Harmful by
inhalation and if swallowed. Irritating to eyes and respiratory
system.
Target organ(s): Heart. Nerves.

For additional information on toxicity, please refer to Section 11.

Section 4 - First Aid Measures

ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is
conscious. Call a physician immediately.

INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give
artificial respiration. If breathing is difficult, give oxygen.

Section 5 - Fire Fighting Measures

EXPLOSION HAZARDS

May explode when heated.

EXPLOSION DATA

Sensitivity to Mechanical Impact: May be shock-sensitive.

FLASH POINT
N/A

AUTOIGNITION TEMP
N/A

FLAMMABILITY
N/A

EXTINGUISHING MEDIA
Suitable: Noncombustible. Use extinguishing media appropriate to surrounding fire conditions.

FIREFIGHTING
Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.
Specific Hazard(s): Contact with other material may cause fire. Emits toxic fumes under fire conditions.

EXPOSURE HAZARD(S)
Material: Toxic. Irritant.

Section 6 - Accidental Release Measures

PROCEDURE(S) OF PERSONAL PRECAUTION(S)
Wear self-contained breathing apparatus, rubber boots, and heavy rubber gloves.

METHODS FOR CLEANING UP
Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

Section 7 - Handling and Storage

HANDLING
User Exposure: Do not breathe dust. Do not get in eyes, on skin, on clothing. Avoid prolonged or repeated exposure. Do not drop.

STORAGE
Suitable: Keep tightly closed. Keep away from combustible materials, heat, sparks, and open flame. Store in a cool dry place.

Section 8 - Exposure Controls / PPE

ENGINEERING CONTROLS
Use only in a chemical fume hood. Safety shower and eye bath.

PERSONAL PROTECTIVE EQUIPMENT
Other: Wear appropriate government approved respirator, chemical-resistant gloves, safety goggles, other protective clothing.

GENERAL HYGIENE MEASURES
Wash thoroughly after handling.

EXPOSURE LIMITS, RTECS

Country	Source	Type	Value
USA	ACGIH	TWA	0.5 MG (BA) /M3

USA MSHA Standard-air TWA 0.5 MG(BA)/M3
USA OSHA. PEL 8H TWA 0.5 MG(BA)/M3
New Zealand OEL
Remarks: check ACGIH TLV

Section 9 - Physical/Chemical Properties

Appearance	N/A	
Property	Value	At Temperature or Pressure
Molecular Weight	261.35 AMU	
pH	N/A	
BP/BP Range	N/A	
MP/MP Range	592 °C	
Freezing Point	N/A	
Vapor Pressure	N/A	
Vapor Density	N/A	
Saturated Vapor Conc.	N/A	
SG/Density	3.23 g/cm3	
Bulk Density	N/A	
Odor Threshold	N/A	
Volatile%	N/A	
VOC Content	N/A	
Water Content	N/A	
Solvent Content	N/A	
Evaporation Rate	N/A	
Viscosity	N/A	
Surface Tension	N/A	
Partition Coefficient	N/A	
Decomposition Temp.	N/A	
Flash Point	N/A	
Explosion Limits	N/A	
Flammability	N/A	
Autoignition Temp	N/A	
Refractive Index	N/A	
Optical Rotation	N/A	
Miscellaneous Data	N/A	
Solubility	N/A	

N/A = not available

Section 10 - Stability and Reactivity

STABILITY

Conditions to Avoid: Moisture Heat.

Materials to Avoid: Acids, Bases, Acid anhydrides, Reducing agents.

HAZARDOUS DECOMPOSITION PRODUCTS

Hazardous Decomposition Products: Nitrogen oxides.

Section 11 - Toxicological Information

ROUTE OF EXPOSURE

Skin Contact: May cause skin irritation.

Eye Contact: Causes eye irritation.

Inhalation: Material is irritating to mucous membranes and upper respiratory tract.

Multiple Routes: Harmful if inhaled or swallowed.

TARGET ORGAN(S) OR SYSTEM(S)

Heart. Nerves. Kidneys. G.I. System. Bone marrow. Spleen. Liver.

Blood.

SIGNS AND SYMPTOMS OF EXPOSURE

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

TOXICITY DATA

Oral
Rat
355 mg/kg
LD50

Oral
Mouse
266 mg/kg
LD50

Intraperitoneal
Mouse
293 MG/KG
LD50
Remarks: Autonomic Nervous System:Other (direct) parasympathomimetic. Behavioral:Muscle weakness. Gastrointestinal:Nausea or vomiting.

Intravenous
Mouse
16 MG/KG
LD50

Oral
Mammal
390 mg/kg
LD50
Remarks: Autonomic Nervous System:Other (direct) parasympathomimetic. Behavioral:Muscle weakness. Gastrointestinal:Nausea or vomiting.

IRRITATION DATA

Skin
Rabbit
500 mg
24H
Remarks: Mild irritation effect

Eyes
Rabbit
100 mg
24H
Remarks: Moderate irritation effect

ACGIH CARCINOGEN LIST

Rating: A4

Section 12 - Ecological Information

No data available.

Section 13 - Disposal Considerations

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION

To a solution of the product in water, add an excess of dilute sulfuric acid. Let stand overnight. Remove any insolubles and bury in a landfill site approved for hazardous waste disposal. Observe all federal, state, and local environmental regulations.

Section 14 - Transport Information

DOT

Proper Shipping Name: Barium nitrate
UN#: 1446
Class: 5.1
Packing Group: Packing Group II
Hazard Label: Oxidizer
Hazard Label: Toxic substances.
PIH: Not PIH

IATA

Proper Shipping Name: Barium nitrate
IATA UN Number: 1446
Hazard Class: 5.1
Packing Group: II

Section 15 - Regulatory Information

EU ADDITIONAL CLASSIFICATION

Symbol of Danger: O Xn
Indication of Danger: Oxidizing. Harmful.
R: 8 20/22
Risk Statements: Contact with combustible material may cause fire. Harmful by inhalation and if swallowed.
S: 17 28
Safety Statements: Keep away from combustible material. After contact with skin, wash immediately with plenty of polyethylene glycol.

US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Oxidizing. Toxic (USA) Harmful (EU).
Risk Statements: Contact with combustible material may cause fire. Harmful by inhalation and if swallowed. Irritating to eyes and respiratory system.
Safety Statements: Keep away from combustible material. In case of contact with eyes, rinse immediately with plenty of water and seek medical advice. Take off immediately all contaminated clothing. Wear suitable protective clothing, gloves, and eye/face protection.
US Statements: Target organ(s): Heart. Nerves.

UNITED STATES REGULATORY INFORMATION

SARA LISTED: No
NOTES: This product is subject to SARA section 313 reporting requirements. This product is subject to SARA section 313 reporting requirements.
TSCA INVENTORY ITEM: Yes

CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.
DSL: Yes
NDSL: No

Section 16 - Other Information

DISCLAIMER

For R&D use only. Not for drug, household or other uses.

WARRANTY

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. Sigma-Aldrich Inc., shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. Copyright 2004 Sigma-Aldrich Co. License granted to make unlimited paper copies for internal use only.