

MATERIAL SAFETY DATA SHEET

Barium Nitrate

SECTION 1 . Product and Company Identification

Product Name and Synonym: Barium Nitrate
Product Code: B0680
Material Uses:
Manufacturer: Science Stuff
1104 Newport Ave
Austin, TX 78753
(512) 837-6020
Entry Date : 5/28/2013
Print Date: 5/28/2013
24 Hour Emergency Assistance : Chemtrec 800-424-9300
Canutec 613-996-6666

Health:	3			
Flammability:	0			
Reactivity:	3			
Hazard Rating:				
Least	Slight	Moderate	High	Extreme
0	1	2	3	4
NA=Not Applicable		NE=Not Established		

SECTION 2 HAZARD IDENTIFICATION

Heat, shock, friction, or contact with other materials may cause fire or explosion. Harmful if swallowed. Avoid breathing vapor or dust. Use adequate ventilation. Avoid contact with eyes, skin or clothes. Wash thoroughly after handling. Keep closed.

Physical state: Solid. [Crystalline solid. Powder]
OSHA/HCS status: This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).
Emergency overview:
DANGER!
OXIDIZER.
MAY BE FATAL IF SWALLOWED.
CAUSE RESPIRATORY TRACT, EYE AND SKIN IRRITATION.
HARMFUL IF INHALED
CAUSES DAMAGE TO THE FOLLOWING ORGANS: HEART, RESPIRATORY TRACT, SKIN, CENTRAL NERVOUS SYSTEM, EYE, LENS OR CORNEA.
CONTACT WITH OTHER MATERIAL MAY CAUSE FIRE.

Do not ingest.
Avoid contact with skin and clothing. Avoid breathing dust.
Store in tightly-closed container. Avoid contact with combustible materials.
Use only with adequate ventilation. Wash thoroughly after handling.

Routes of entry:
Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects:
Medical conditions aggravated by over-exposure:
Repeated skin exposure can produce local skin destruction or dermatitis. Repeated or prolonged exposure to the substance can produce lung damage.
Repeated or prolonged exposure to the substance can produce target organs damage.
Repeated exposure of the eyes to a low level of dust can produce eye irritation.

SECTION 3 MIXTURE COMPONENTS

SARA 313	Component	CAS Number	Percent Comp.	Dimension	Exposure Limits
<input type="checkbox"/>	Barium Nitrate	CAS# 10022-31-8	100 %	W/W	OSHA PEL 0.5 mg/mf as Ba

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SECTION 4 FIRST AID MEASURES

Heat, shock, friction, or contact with other materials may cause fire or explosion. Harmful if swallowed. Avoid breathing vapor or dust. Use adequate ventilation. Avoid contact with eyes, skin or clothes. Wash thoroughly after handling. Keep closed.

FIRST AID: CALL A PHYSICIAN. SKIN: In case of contact, immediately flush skin with water for at least 15 minutes while removing contaminated clothing and shoes. Thoroughly clean clothing and shoes before reuse.

EYES: Wash eyes with plenty of water for at least 15 minutes, lifting lids occasionally. Seek Medical Aid. INHALATION: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen

INGESTION: If swallowed, induce vomiting immediately after giving two glasses of water. Never give anything by mouth to an unconscious person.

SECTION 5 FIRE FIGHTING MEASURES

Fire Extinguisher Type: Water spray, Carbon dioxide, dry chemical, powder, foam.

Fire / Explosion Hazards: Negligible fire hazard when exposed to heat or flame. Oxidizer, if in contact with combustible material may result in ignition.

Fire Fighting Procedure: Move containers from fire area if possible. Cool containers exposed to flame with water from side until well after fire is out .

SECTION 6 ACCIDENTAL RELEASE MEASURES

Dispose of in a manner consistent with federal, state and local regulations.

Personal precautions: Immediately contact emergency personnel. Eliminate all ignition sources. Keep unnecessary personnel away. Use suitable protective equipment. Do not touch or walk through spilled material.

Environmental precautions: Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

Methods for cleaning up: If emergency personnel are unavailable, vacuum or carefully scoop up material and place in an appropriate container for disposal by incineration. Avoid creating dusty conditions and prevent wind dispersal.

SECTION 7 HANDLING AND STORAGE

Do not touch spilled material. Clean with shovel, place into cool dry container and cover. Keep unnecessary people away.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

Respiratory Protection: NIOSH/MSHA-approved respirator

Ventilation

Local Exhaust

Mechanical

Protective Gloves: Wear appropriate gloves to prevent skin exposure

Eye Protection: Splash Goggles

Other Protective Equipment: Wear appropriate clothing to prevent skin exposure

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ACGIH TLV (United States, 1/2006) notes: 1996 Adoption Refers to

Barium Nitrate

Appendix A – Carcinogens.

TWA: 0.5 mg/m3 8 hour(s) Form: All forms
NIOSH REL (United States, 12/2001) Notes: Note: The REL and PEL also apply to other soluble barium compounds (as Ba) except Barium sulfate.

TWA: 0.5 mg/m3 10 hour(s) Form: All forms
OSHA PEL (United States, 8/1997)

TWA: 0.5 mg/m3 8 hour(s) Form: All forms
OSHA PEL 1989 (United States, 3/1989)

TWA: 0.5 mg/m3 8 hour(s) Form: All forms

Consult local authorities for acceptable exposure limits.

Engineering measurers: Use only with adequate ventilation. If user operations generate dust, fumes, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Personal Protection

Eyes: Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts.

Recommended:

safety glasses with side-shields,

Skin: Personal protective equipment for the body should be selected based on the task being performed and risks involved and should be approved by a specialist before handling this product.

Body recommended:

lab coat and gloves

Respiratory: Use a properly fitted, air-purifying or air-fed respirator complying with an approved standard if a risk assessment indicates this is necessary. Respirator selection must be based on known or anticipated exposure levels, the hazards of the product and the safe working limits of the selected respirator.

Hands: Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary.

Hygiene measures: Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Melting Point:	1098 Deg F	Percent Volatile by Volume:	Information not available.
Boiling Point:	Decomposes	Evaporation Rate	Not applicable
Vapor Pressure:	Information not available	Evaporation Standard	
Vapor Density:	Information not available	Auto Ignition Temp	Not applicable
Solubility in Water:	8.7%	Lower Flamm. Limit in Air	Not applicable
Appearance /Odors:	White , odorless crystals	Upper Flamm. Limit in Air	Not applicable

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Flash Point: Not flammable

Specific Gravity: 3.24

SECTION 10 STABILITY AND REACTIVITY INFORMATION

Stability: Stable

Conditions to Avoid: Under normal temperatures and pressures.

Materials to Avoid: Metal powders, combustible materials, and reducing agents.

Hazardous Decomposition Products: Toxic oxides may be released.

Hazardous polymerization: Will Not Occur

Conditions to Avoid: None known

SECTION 11 Toxicological Information

Toxicity data- United States- Product/ ingredient name:

Barium Nitrate

LD50	355 mg/kg	Oral	Rat
LD50	390 mg/kg	Oral	Rat
LD50	266 mg/kg	Oral	Mouse
LDLo	150 mg/kg	Oral	Rabbit
LDLo	800 mg/kg	Oral	Dog

Chronic effects on humans: CARCINOGENIC EFFECTS: Classified A4. (Not classifiable for humans or animals.) by ACGIH
causes damage to the following organs: heart, central nervous system (CNS), upper respiratory tract, skin, eye, lens or cornea.

Other toxic effects on humans: Extremely hazardous in case ingestion
Very hazardous in case of skin contact (irritant), of eye contact (irritant), of ingestion (lung irritant).

Specific effects

Carcinogenic effects: : No known significant effects or critical hazards

Mutagenic effects: No known significant effects or critical hazards

Teratogenicity/Reproductive toxicity: No known significant effects or critical hazards

Sensitization

Ingestion: No known significant effects or critical hazards

Inhalation: Irritating to respiratory system.

Eyes: Irritating to eyes.

Skin: Irritating to the skin

SECTION 12 Ecological Information

Environmental effects : No known significant effects or critical hazards.

Products of degradation: These products are nitrogen oxides (NO, NO2 etc.),
Some metallic oxides.

Toxicity of the products of biodegradation: The products of degradation are less toxic than the product itself.

SECTION 13 Disposal Considerations

Waste disposal: the generation of waste should be avoided or minimized wherever possible. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Disposal of this product, solutions and any by-product should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements.

Disposal should be in accordance with applicable regional, national and local laws and regulations. Local regulations may be more stringent than regional or national requirements.

SECTION 14 Transport Information

Barium Nitrate

DOT Classification: Barium Nitrate, 5.1, (6.1), UN1446, PG II

DOT Regulations may change from time to time. Please consult the most recent D.O.T. regulations.

SECTION 15 Regulatory Information

United States

HCS Classification:
Oxidizing material
Target organ effects
Highly toxic material
Irritating material

U.S. Federal regulations:

United States inventory (TSCA 8b): listed
SARA 302/304/311/312 extremely hazardous substances: No products were found.
SARA 302/304 emergency planning and notifications: No products were found.
SARA 302/304/311/312 hazardous chemicals: Barium Nitrate
SARA 311/312 MSDS distribution- Chemical inventory- hazard identification: Barium Nitrate
Fire Hazard:
Immediate (acute) health hazard
Clean Water Act (CWA) 307: No products were found.
Clean Water Act (CWA) 311: No products were found.
Clean Air Act (CAA) 112 accidental release prevention: No products were found.
Clean Air Act (CAA) 112 regulated flammable substance: No products were found.
Clean Air Act (CAA) 112 regulated toxic substance: No products were found.
SARA 313
Form R – Reporting Requirements: Barium Nitrate
CAS number : 10022-31-8 Concentration : 100
Supplier notification : Barium Nitrate
CAS number : 10022-31-8 Concentration : 100

SARA 313 notifications must not be detached from the MSDS and any copying and redistribution of the MSDS shall include copying and redistribution of the notice attached to copies of the MSDS subsequently redistributed.

State regulations:

Pennsylvania RTK: Barium Nitrate
(environmental hazard, generic environmental hazard
)

Massachusetts RTK: Barium Nitrate

New Jersey: Barium Nitrate

Canada

WHMIS (Canada) :

Class C: Oxidizing material

Class D-1A: Material causing immediate and serious toxic effects (Very toxic)

Class D-2B: Material causing other toxic effects (Toxic)

CEPA DSL/ CEPA NDSL : CEPA DSL: Barium Nitrate

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.

SECTION 16 Additional Information

Barium Nitrate

Flammability

Health

Reactivity

Revisions

NFPA

0.1

The information herein is believed to be accurate and is offered in good faith for the user's consideration and investigation. No warranty either expressed or implied is made for the completeness or accuracy of the information whether originating from the above mentioned company or not. Users of this material should satisfy themselves by independent investigation of current scientific and medical knowledge that the material can be used safely.