

# Safety Data Sheet



## 1: Identification

### 1.1: Product Identifier

Product Name: Ba

Product Number(s): 1BA-0001F

CAS Number: 7440-39-3

SDS Document Number: 000013

### 1.2: Recommended Uses and Restrictions

Recommended Uses

Manufacture of substances

Restrictions

Not for food or drug use.

### 1.3: Supplier Contact Information

APL Engineered Materials, Inc.

2401 N. Willow Rd.

Urbana, IL 61802

Phone: 217-367-1340

Fax: 217-367-9084

### 1.4: Emergency Phone Number

International: +01-813-248-0585

United States: 800-255-3924

## 2: Hazards Identification

### 2.1: Classifications

Flammable Solids - Category 1

Substances which, in contact with water, emit flammable gases - Category 2

### 2.2: GHS Label Elements

Pictograms



Signal Word: Danger

Hazard Statements

H228: Flammable solid.

H261: In contact with water releases flammable gases.

Precautionary Statements

P210: Keep away from heat/sparks/open flames/hot surfaces. No smoking.

P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire.  
P231 + P232: Handle under inert gas. Protect from moisture.  
P240: Ground/bond container and receiving equipment.  
P241: Use explosion-proof electrical equipment.  
P280: Wear protective gloves, clothing, and eyewear.  
P335 + P334: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages.  
P370 + P378: In case of fire: Use dry chemical powder for extinction.  
P402 + P404: Store in a dry place. Store in a closed container.  
P501: Dispose of contents/container to licensed disposal facility.

### 2.3: Hazards Not Otherwise Classified or Not Covered by GHS

Reacts violently with water

### 2.4: Amount(s) of substances with unknown toxicity

None

## 3: Composition/Information on Ingredients

3.1: .Ingredient	.Weight%	.Formula	.CAS Number	.Mol Wt	.EC Number
Ba	100	Ba	7440-39-3	137.33	231-149-1

### 3.2: Other Hazardous components

none

### 3.3: Trade Secret Disclaimer

none

### 3.4: Synonyms

Barium

## 4: First Aid Measures

### 4.1: First Aid

#### General

Consult with physician and provide this Safety Data Sheet

Remove person from area of exposure and remove any contaminated clothing

#### In contact with eyes

Flush eyes with plenty of water for at least 15 minutes, occasionally lifting the upper and lower eyelids.

Seek medical attention if irritation develops or persists

#### In contact with skin

Wash thoroughly with soap and plenty of water. Remove all contaminated clothing for proper laundering. Seek medical attention if irritation develops or persists.

#### If swallowed

If conscious and alert, rinse mouth and drink 2-4 cupfuls of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical aid.

#### If inhaled

Keep patient warm, seek immediate medical advice

Remove from exposure to fresh air immediately. If breathing is difficult, give oxygen. Get medical aid.

If breathing has ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

### 4.2: Most important symptoms and effects; acute and delayed

No data available.

- 4.3: Indication of any immediate medical attention and special treatment needed  
no data available

## **5: Fire Fighting Measures**

- 5.1: Fire extinguishing media  
dry chemical  
Do not use water  
class D metal fire agent
- 5.2: Specific hazards arising from the substance or mixture  
generates flammable hydrogen gas in contact with water
- 5.3: Special protective equipment and precautions for firefighters.  
Wear fully protected impervious suit  
Wear self contained breathing apparatus for fire fighting if necessary

## **6: Accidental Release Measures**

- 6.1: Personal precautions, protective equipment, and emergency procedures.  
Ensure adequate ventilation.  
Evacuate personnel to safe areas.  
For personal protection see section 8.  
Avoid breathing dust.  
Avoid dust formation.  
Use personal protective equipment.
- 6.2: Methods and materials for containment and cleaning up.  
Sweep up and shovel.  
Keep in suitable, closed containers for disposal.
- 6.3: Environmental precautions  
Do not let product enter drains.
- 6.4: Disposal  
Dispose of in accordance with local regulations.  
See section 13.

## **7: Handling and Storage**

- 7.1: Precautions for safe handling  
Keep container tightly sealed.  
Use in a well ventilated area.  
Reacts violently with water  
Handle under dry, inert atmosphere.  
Store in cool dry place
- 7.2: Conditions for safe storage

Store under inert gas.  
Store in a dry and well-ventilated place.  
Store away from moisture.  
Keep container tightly closed.

### 7.3: Incompatibilities

moisture sensitive  
air sensitive

## 8: Exposure Controls/Personal Protection

### 8.1: Control parameters

OSHA permissible exposure limit (PEL)

not listed

ACGIH threshold limit value (TLV)

not listed

NIOSH recommended exposure limit (REL)

not listed

### 8.2: Engineering controls

Use adequate ventilation to keep airborne concentrations low

Facilities storing or utilizing this material should be equipped with an eyewash facility and a safety shower

### 8.3: Personal protective equipment

Eyes

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166

Skin

Wear appropriate, chemical resistant clothing to prevent skin exposure

Wear appropriate, chemical-resistant protective gloves to prevent skin exposure.

Clothing

Wear appropriate protective clothing to prevent skin exposure

Remove all soiled and contaminated clothing immediately

Respirator

Follow the OSHA respirator regulations found in 29CFR 1910.134 or European Standard EN 149.

Always use a NIOSH or European Standard EN 149 approved respirator when necessary

## 9: Physical and Chemical Properties

### 9.a: Appearance

State: Solid

Form: Pieces

Color: Silver Grey

### 9.b: Odor: odorless

### 9.c: Odor threshold: no data available

### 9.d: pH: not applicable

- 9.e: Melting point / freezing point: 727 c / (1,341 F )  
9.f: Initial boiling point and range: 1,640 C / (2,984 F )  
9.g: Flashpoint: no data available  
9.h: Evaporation rate: no data available  
9.i: Flammability (solid, gas): Highly flammable  
9.j: Upper/lower flammability or explosive limits: no data available  
9.k: Vapor pressure: .0013 hPa @547 C / 1017 F  
9.l: Vapor density: no data available  
9.m: Relative density: no data available  
9.n: Water Solubility: Reacts violently - contact with water releases flammable gases  
9.o: Partition coefficient: n-octanol/water: no data available  
9.p: Auto-ignition temperature: no data available  
9.q: Decomposition temperature: no data available  
9.r: Viscosity: no data available

## 10: Stability and Reactivity

### 10.1: Reactivity

Reacts violently with water

### 10.2: Chemical stability

Stable under recommended storage conditions.

### 10.3: Possibility of hazardous reactions

Contact with water releases flammable gases

Reacts violently with water

### 10.4: Conditions to avoid

exposure to water

exposure to air

### 10.5: Incompatible materials

See section 7.3.

### 10.6: Hazardous decomposition products

Other decomposition products - no data available

In the event of fire: see section 5.2

## 11: Toxicological Information

### 11.1: Toxicity data

Acute toxicity - Oral

no data available

Acute toxicity - Dermal

no data available

Acute toxicity - Inhalation

No data available.

Skin corrosion/irritation  
no data available

Eye damage/irritation  
No data available.

Respiratory irritation  
No data available.

Germ cell mutagenicity  
Tests showed no mutagenic effects.

Reproductive toxicity  
No evidence of reproductive toxicity.

Specific organ toxicity - single exposure  
No effect known

Specific organ toxicity - repeated exposure  
No data available.

Aspiration hazard  
No data available.

Additional information  
RTECS: CQ8370000

ACGIH carcinogenicity  
The ACGIH has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

IARC carcinogenicity  
The IARC has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

NTP carcinogenicity  
The NTP has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

OSHA carcinogenicity  
OSHA has not identified any component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

#### 11.2: Routes of exposure

skin

#### 11.3: Symptoms of exposure

See section 4.2

#### 11.4: Delayed and immediate effects of exposure

To the best of our knowledge the toxicological properties have not been thoroughly investigated.

## **12: Ecological Information**

#### 12.1: Ecotoxicity

Toxicity to fish

LC50 - *Cyprinodon variegatus* (sheepshead minnow) - > 500 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

No data available

Toxicity to algae/bacteria

No data available

#### 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: Other effects

no data available

### **13: Disposal Considerations**

#### 13.1: Waste treatment methods

No data available

#### 13.2: Safe handling

See section 7.1 .

#### 13.3: Product disposal

Contact a licensed professional waste disposal service to dispose of this material.

#### 13.4: Packaging disposal

Dispose of as unused product.

### **14: Transport Information**

#### 14.1: DOT(US)

UN Number: 1400

Proper Shipping Name: Barium

Packing Group: II

Shipping Class(es): 4.3

Marine Pollutant: No

#### 14.2: IMDG

UN Number: 1400

Proper Shipping Name: Barium

Packing Group: II

Shipping Class(es): 4.3

Marine Pollutant: No

#### 14.3: IATA

UN Number: 1400

Proper Shipping Name: Barium

Packing Group: II

Shipping Class(es): 4.3

#### 14.4: Special Shipping Precautions

None

### 15: Regulatory Information

#### 15.1: TSCA inventory

This material is listed on the TSCA inventory.

#### 15.2: SARA 302 components

This material is not subject to the reporting requirements of SARA Title III, Section 302.

#### 15.3: SARA 313 components

This material is subject to the reporting requirements of SARA Title III, Section 313.

#### 15.4: SARA 313/312 hazards

Reactivity hazard.

#### 15.5: Other information

Massachusetts Right To Know Components - This product does not contain materials listed on the Massachusetts Right to Know list

California Prop. 65 Components - This product does not contain any chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

New Jersey Right To Know Components -This product contains materials listed on the New Jersey Right to Know list

Pennsylvania Right To Know Components -This product contains materials listed on the Pennsylvania Right to Know list

### 16: Additional Information

#### 16.1: NFPA

Health: 2

Fire: 0

Reactivity: 1

Special: #

#### 16.2: HMIS

Health: 2

Chronic:

Flammability: 3

Physical Hazard: 1

#### 16.3: Disclaimers

The information herein is believed to be accurate and reliable as of the date compiled. However, APL Engineered Materials, Inc. makes no representation, warranty, or guarantee of any kind with respect to the information on this data sheet or any use of the product based upon this information.

For industrial use only. Not for drug, household or other uses

#### 16.4: References

Information contained on this SDS sheet was obtained from some or all of the following sources: American Conference of Governmental Industrial Hygienists (ACGIH), TLVs and BEIs; National Institute for Occupational Safety and Health (NIOSH), Pocket Guide to Chemical Hazards; European Chemicals Agency, <http://echa.europa.eu/>; The National Institute of Health, U.S National Library of



Medicine, TOXNET, Toxicology Data Network; and the Registry of Toxic Effects of Chemical Substances (RTECS) database.

#### 16.5: Version

Preparation Date: 5/22/2015

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