

Safety Data Sheet



1: Identification

1.1: Product Identifier

Product Name: PbBr₂

Product Number(s): 1PBRR2-0004F

CAS Number: 10031-22-8

SDS Document Number: 000146

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

United States: 800-255-3924

International: +01-813-248-0585

2: Hazards Identification

2.1: Classifications

Acute Aquatic Toxicity - Category 1

Acute Toxicity, Inhalation - Category 4

Acute Toxicity, Oral - Category 4

Carcinogenicity - Category 2

Chronic Aquatic Toxicity - Category 1

Toxic to Reproduction - Category 1B

2.2: GHS Label Elements

Pictograms



Signal Word: Danger

Hazard Statements

- H302: Harmful if swallowed.
- H332: Harmful if inhaled.
- H351: Suspected of causing cancer.
- H360: May damage fertility or the unborn child.
- H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements

- P201: Obtain special instructions before use.
- P202: Do not handle until all safety precautions have been read and understood.
- P261: Avoid breathing dust.
- P264: Wash hands thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P271: Use only outdoors or in a well-ventilated area.
- P273: Avoid release to the environment.
- P281: Use personal protective equipment as required.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P308 + P313: IF EXPOSED or concerned: Get medical advice/attention.
- P330: Rinse mouth.
- P391: Collect spillage.
- P405: Store locked up.
- P501: Dispose of contents/container to licensed disposal facility.

2.3: Hazards Not Otherwise Classified or Not Covered by GHS

None.

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
PbBr2	100	PbBr2	10031-22-8	367.01	233-084-4

3.2: Other Hazardous components

none

3.3: Trade Secret Disclaimer

none

3.4: Synonyms

Lead (II) Bromide
lead dibromide

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

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

Harmful if swallowed.

Harmful if inhaled

Possible human carcinogen.

May damage the unborn child.

May damage fertility.

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

If swallowed: Immediately call a POISON CENTER or doctor/ physician.

If inhaled : Immediately call a POISON CENTER or doctor/ physician.

5: Fire Fighting Measures

5.1: Fire extinguishing media

dry chemical

carbon dioxide

water or alcohol-resistant foam

5.2: Specific hazards arising from the substance or mixture

lead oxides

hydrobromic acid and hydrobromic acid fumes

5.3: Special protective equipment and precautions for firefighters.

Wear self contained breathing apparatus for fire fighting if necessary

6: Accidental Release Measures

6.1: Personal precautions, protective equipment, and emergency procedures.

Use personal protective equipment.

For personal protection see section 8.

Avoid dust formation.

Avoid breathing dust.

Evacuate personnel to safe areas.

Ensure adequate ventilation.

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

See section 13.

Dispose of in accordance with local regulations.

7: Handling and Storage

7.1: Precautions for safe handling

Provide appropriate exhaust ventilation at places where dust is formed.

Avoid formation of dust and aerosols.

See precautionary statements in section 2.2.

Avoid contact with skin and eyes.

7.2: Conditions for safe storage

Keep container tightly closed.

Store away from moisture.

Store in a dry and well-ventilated place.

Store under inert gas.

7.3: Incompatibilities

strong oxidizing agents

8: Exposure Controls/Personal Protection

8.1: Control parameters

OSHA permissible exposure limit (PEL)

0.05 mg/m³ (TWA)

ACGIH threshold limit value (TLV)

0.05 mg/m³ (TWA)

NIOSH recommended exposure limit (REL)

0.05 mg/m³ (TWA)

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 protective gloves to prevent skin exposure.

Clothing

Wear appropriate protective clothing to prevent skin exposure

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: powder or spheres

Color: White

9.b: Odor: no data available

9.c: Odor threshold: no data available

9.d: pH: no data available

9.e: Melting point / freezing point: 371 °C (700 °F)

9.f: Initial boiling point and range: 892 °C (1,638 °F)

9.g: Flashpoint: no data available

9.h: Evaporation rate: no data available

9.i: Flammability (solid, gas): no data available

9.j: Upper/lower flammability or explosive limits: no data available

9.k: Vapor pressure: no data available

9.l: Vapor density: no data available

9.m: Relative density: 6.66 g/mL at 25 °C (77 °F)

9.n: Water Solubility: 0.973 g/100 mL (20 °C)

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

no data available

10.2: Chemical stability

Stable under recommended storage conditions.

10.3: Possibility of hazardous reactions

no data available

10.4: Conditions to avoid

In the event of fire: see section 5

exposure to water

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

Harmful if swallowed.

Acute toxicity - Dermal

no data available

Acute toxicity - Inhalation

Harmful if inhaled.

Skin corrosion/irritation

no data available

Eye damage/irritation

No data available.

Respiratory irritation

No data available.

Germ cell mutagenicity

no data available

Reproductive toxicity

Suspected reproductive toxicant.

Specific organ toxicity - single exposure

No data available.

Specific organ toxicity - repeated exposure

No data available.

Aspiration hazard

No data available.

Additional information

No data available.

ACGIH carcinogenicity

The ACGIH has identified a component of this product present at levels greater than or equal to 0.1% as a probable, possible or confirmed human carcinogen.

IARC carcinogenicity

Group 2A: Probably carcinogenic to humans.

NTP carcinogenicity

The NTP has identified a 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 regulated carcinogen.

11.2: Routes of exposure

inhalation

See section 2.2

oral

11.3: Symptoms of exposure

See section 4.2

11.4: Delayed and immediate effects of exposure

Known human carcinogen

Inorganic bromides may lead to depression, emaciation and in severe cases psychosis and severe mental deterioration. Bromoderma, a bromine rash, often occurs from prolonged exposure and usually occurs on the face resembling acne or furunculosis.

Exposure to lead inhibits the synthesis of hemoglobin and results in anemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death

12: Ecological Information

12.1: Ecotoxicity

Toxicity to fish

No data available

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

Very toxic to aquatic life with long lasting effects.

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: 2291

Proper Shipping Name: Lead compounds, soluble, n.o.s. (Lead dibromide)

Packing Group: III

Shipping Class(es): 6.1

Marine Pollutant: Yes

14.2: IMDG

UN Number: 2291

Proper Shipping Name: Lead compounds, soluble, n.o.s. (Lead dibromide)

Packing Group: III

Shipping Class(es): 6.1

Marine Pollutant: Yes

14.3: IATA

UN Number: 2291

Proper Shipping Name: Lead compounds, soluble, n.o.s. (Lead dibromide)

Packing Group: III

Shipping Class(es): 6.1

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

Chronic health hazard.

Acute health hazard.

15.5: Other information

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

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

California Prop. 65 Components - This product does contain chemicals known to State of California to cause cancer, birth defects, or any other reproductive harm.

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

16: Additional Information

16.1: NFPA

Health: 2

Fire: 0

Reactivity: 0

Special:

16.2: HMIS

Health: 2

Chronic: *

Flammability: 0

Physical Hazard: 0

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

Revision Date: 5/22/2015

Version Number: GHS 1.0