

Safety Data Sheet



1: Identification

1.1: Product Identifier

Product Name: ZnBr₂

Product Number(s): 1ZNBR2-0004F

CAS Number: 7699-45-8

SDS Document Number: 000305

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 2

Acute Toxicity, Oral - Category 4

Chronic Aquatic Toxicity - Category 2

Eye Damage/Irritation - Category 1

Sensitization - Skin - Category 1

Skin Corrosion/Irritation - Category 1B

2.2: GHS Label Elements

Pictograms



Signal Word: Danger

Hazard Statements

- H302: Harmful if swallowed.
- H314: Causes severe skin burns and eye damage.
- H317: May cause an allergic skin reaction.
- H318: Causes serious eye damage.
- H401: Toxic to aquatic life.
- H411: Toxic to aquatic life with long lasting effects.

Precautionary Statements

- P260: Do not breathe dust.
- P264: Wash hands thoroughly after handling.
- P270: Do not eat, drink or smoke when using this product.
- P272: Contaminated work clothing should not be allowed out of the workplace.
- P273: Avoid release to the environment.
- P280: Wear protective gloves, clothing, and eyewear.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P303 + P361 + P353: IF ON SKIN (or hair): Remove/take off immediately all contaminated clothing. Rinse skin with water/shower.
- P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P305 + P351 + P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
- P321: Specific treatment. Call a physician or poison control center.
- P333 + P313: If skin irritation or rash occurs: Get medical advice/attention.
- P363: Wash contaminated clothing before reuse.
- 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
ZnBr2	100	ZnBr2	7699-45-8	225.198	231-718-4

3.2: Other Hazardous components

none

3.3: Trade Secret Disclaimer

none

3.4: Synonyms

- Zinc Bromide
- Zinc 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

Causes severe burns.

Causes severe eye damage.

Harmful if swallowed.

May cause an allergic skin reaction.

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

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

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

5: Fire Fighting Measures

5.1: Fire extinguishing media

water or alcohol-resistant foam

dry chemical

carbon dioxide

5.2: Specific hazards arising from the substance or mixture

zinc 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.

Evacuate personnel to safe areas.

Avoid breathing dust.

For personal protection see section 8.

Ensure adequate ventilation.

Use personal protective equipment.

Avoid dust formation.

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

See precautionary statements in section 2.2.

Avoid contact with skin and eyes.

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

7.2: Conditions for safe storage

Keep container tightly closed.

Store under inert gas.

Store away from moisture.

Store in a dry and well-ventilated place.

7.3: Incompatibilities

sodium

sodium oxides

potassium

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 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: odorless

9.c: Odor threshold: no data available

9.d: pH: no data available

9.e: Melting point / freezing point: 394 °C (741 °F)

9.f: Initial boiling point and range: 697 °C (1,287 °F) at 1,013 hPa (760 mmHg)

9.g: Flashpoint: no data available

9.h: Evaporation rate: no data available

9.i: Flammability (solid, gas): Not flammable

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

9.k: Vapor pressure: 5.2mmHg at 25 degree C

9.l: Vapor density: no data available

9.m: Relative density: 4.201 g/cm³

9.n: Water Solubility: 4470 g/l in 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

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

LD50 Oral - rat - 1,477 mg/kg

Acute toxicity - Dermal

LD50 Dermal - Rabbit - > 2,000 mg/kg

Acute toxicity - Inhalation

No data available.

Skin corrosion/irritation

Corrosive to skin

Eye damage/irritation

Causes severe eye irritation.

Respiratory irritation

No data available.

Germ cell mutagenicity

no data available

Reproductive toxicity

No evidence of reproductive toxicity.

Specific organ toxicity - single exposure

No data available.

Specific organ toxicity - repeated exposure

No effect known

Aspiration hazard

No data available.

Additional information

RTECS: ZH1150000

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

See section 2.2

11.3: Symptoms of exposure

See section 4.2

11.4: Delayed and immediate effects of exposure

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.

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

12: Ecological Information

12.1: Ecotoxicity

Toxicity to fish

semi-static test LC50 - other fish - 115.9 mg/l - 96 h

Toxicity to daphnia and other aquatic invertebrates

Immobilization EC50 - Daphnia magna (Water flea) - 8.8 mg/l - 48 h

Toxicity to algae/bacteria

Growth inhibited by 50% - 72 h = 6.6 mg/l.

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: 3260

Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. (Zinc bromide)

Shipping Class(es): 8

Marine Pollutant: Yes

14.2: IMDG

UN Number: 3260

Proper Shipping Name: CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (Zinc bromide)

Packing Group: III

Shipping Class(es): 8

Marine Pollutant: Yes

14.3: IATA

UN Number: 3260

Proper Shipping Name: Corrosive solid, acidic, inorganic, n.o.s. (Zinc bromide)

Packing Group: III

Shipping Class(es): 8

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

Acute health hazard.

15.5: Other information

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

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

Massachusetts Right To Know Components - This product contains 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.

16: Additional Information

16.1: NFPA

Health: 3

Fire: 0

Reactivity: 0

Special:

16.2: HMIS

Health: 3

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

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