

# Safety Data Sheet



## 1: Identification

### 1.1: Product Identifier

Product Name: HgBr2  
Product Number(s): 1HGBR2-0002F  
CAS Number: 7789-47-1  
SDS Document Number: 000176

### 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

Acute Aquatic Toxicity - Category 1  
Acute Toxicity, Dermal - Category 1  
Acute Toxicity, Inhalation - Category 1  
Acute Toxicity, Oral - Category 2  
Chronic Aquatic Toxicity - Category 1  
Specific Target Organ Toxicity - Repeated Exposure - Category 2

### 2.2: GHS Label Elements

#### Pictograms



Signal Word: Danger

Hazard Statements

- H300: Fatal if swallowed.
- H310: Fatal in contact with skin.
- H330: Fatal if inhaled.
- H373: May cause damage to central nervous system through prolonged or repeated exposure.
- H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements

- P260: Do not breathe dust.
- P262: Do not get in eyes, on skin, or on clothing.
- 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.
- P280: Wear protective gloves, clothing, and eyewear.
- P284: Wear respiratory protection.
- P301 + P310: IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician.
- P302 + P350: IF ON SKIN: Gently wash with plenty of soap and water.
- P304 + P340: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
- P330: Rinse mouth.
- P361: Remove/Take off immediately all contaminated clothing.
- P363: Wash contaminated clothing before reuse.
- P391: Collect spillage.
- P403 + P233: Store in a well-ventilated place. Keep container tightly closed.
- 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
HgBr2	100	HgBr2	7789-47-1	360.4	232-169-3

3.2: Other Hazardous components

none

3.3: Trade Secret Disclaimer

none

3.4: Synonyms

- Mercury (II) Bromide
- Mercuric bromide
- Mercury 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

Fatal if inhaled

May cause damage to central nervous system through prolonged or repeated exposure via inhalation, skin contact or ingestion

Fatal if swallowed

Stomach irregularities based on human evidence.

Fatal if in contact with skin.

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

If inhaled : 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

carbon dioxide

dry chemical

water or alcohol-resistant foam

#### 5.2: Specific hazards arising from the substance or mixture

hydrobromic acid and hydrobromic acid fumes

mercury/mercury oxides

#### 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.

Avoid dust formation.

For personal protection see section 8.

Use personal protective equipment.

Evacuate personnel to safe areas.

Avoid breathing dust.

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

Avoid formation of dust and aerosols.

Avoid contact with skin and eyes.

See precautionary statements in section 2.2.

Provide appropriate exhaust ventilation at places where dust is formed.

#### 7.2: Conditions for safe storage

Keep container tightly closed.

Store away from moisture.

Store under inert gas.

Store in a dry and well-ventilated place.

#### 7.3: Incompatibilities

strong oxidizing agents

alkali metals

## 8: Exposure Controls/Personal Protection

#### 8.1: Control parameters

OSHA permissible exposure limit (PEL)

0.1 mg/m<sup>3</sup> (as Hg)

ACGIH threshold limit value (TLV)

0.025 mg/m<sup>3</sup> (as Hg)

NIOSH recommended exposure limit (REL)

0.025 mg/m<sup>3</sup> (as Hg)

#### 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: 236 °C (457 °F)

### 9.f: Initial boiling point and range: 322 °C (612 °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: 1 hPa (1 mmHg) at 136.5 °C (277.7 °F)

### 9.l: Vapor density: no data available

### 9.m: Relative density: 6.050 g/cm<sup>3</sup>

### 9.n: Water Solubility: insoluble in water

### 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 light (may affect product quality)

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

LD50 Oral - rat - 40 mg/kg.

Acute toxicity - Dermal

LD50 Dermal - rat - 100 mg/kg.

Acute toxicity - Inhalation

No data available.

Skin corrosion/irritation

May cause irritation

Eye damage/irritation

May cause eye irritation.

Respiratory irritation

Fatal if inhaled.

Germ cell mutagenicity

no data available

Reproductive toxicity

no data available

Specific organ toxicity - single exposure

No data available.

Specific organ toxicity - repeated exposure

May damage the central nervous system, the kidneys, and the reproductive system through repeated or prolonged exposure via ingestion or inhalation.

Aspiration hazard

No data available.

Additional information

RTECS: OV7415000

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

oral

skin

eyes

See section 2.2

11.3: Symptoms of exposure

See section 4.2

11.4: Delayed and immediate effects of exposure

May damage the central nervous system, the kidneys, and the reproductive system through repeated or prolonged exposure via ingestion or inhalation.

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

## 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.

## 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: 1634

Proper Shipping Name: Mercury bromides

Packing Group: II

Shipping Class(es): 6.1

Marine Pollutant: Yes

14.2: IMDG

UN Number: 1634

Proper Shipping Name: Mercury bromides

Packing Group: II

Shipping Class(es): 6.1

Marine Pollutant: Yes

14.3: IATA

UN Number: 1634

Proper Shipping Name: Mercury bromides

Packing Group: II

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

California Prop. 65 Components - This product does contain 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



## 16: Additional Information

### 16.1: NFPA

Health: 4  
Fire: 0  
Reactivity: 0  
Special:

### 16.2: HMIS

Health: 4  
Chronic: \*  
Flammability: 0  
Physical Hazard: 0

### 16.3: Disclaimers

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

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.

### 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