

## SAFETY DATA SHEET

Preparation Date: 11/02/2015

Revision date 4/9/2019

Revision Number: G2

### 1. IDENTIFICATION

#### Product identifier

**Product code:** Z1048  
**Product Name:** ZINC BROMIDE, ANHYDROUS, REAGENT

#### Other means of identification

**Synonyms:** No information available  
**CAS #:** 7699-45-8  
**RTECS #** ZH1150000  
**CI#:** Not available

#### Recommended use of the chemical and restrictions on use

**Recommended use:** No information available.  
**Uses advised against** No information available

**Supplier:** Spectrum Chemical Mfg. Corp  
 14422 South San Pedro St.  
 Gardena, CA 90248  
 (310) 516-8000

**Order Online At:** <https://www.spectrumchemical.com>  
**Emergency telephone number** Chemtrec 1-800-424-9300  
**Contact Person:** Tom Tyner (USA - West Coast)  
**Contact Person:** Ibad Tirmiz (USA - East Coast)

### 2. HAZARDS IDENTIFICATION

#### Classification

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Considered a dangerous substance or mixture according to the Globally Harmonized System (GHS)

Acute toxicity - Oral	Category 4
Skin corrosion/irritation	Category 1 Sub-category C
Serious eye damage/eye irritation	Category 1

#### Label elements

**Danger**

#### **Hazard statements**

Harmful if swallowed  
 Causes severe skin burns and eye damage



**Hazards not otherwise classified (HNOC)**

Not Applicable

**Other hazards**

Not available

**Precautionary Statements - Prevention**

Wash face, hands and any exposed skin thoroughly after handling  
Do not eat, drink or smoke when using this product  
Do not breathe dust/fume/gas/mist/vapors/spray  
Wear protective gloves/protective clothing/eye protection/face protection

**Precautionary Statements - Response**

*Immediately call a POISON CENTER or doctor/physician*  
IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER or doctor/physician.  
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Wash contaminated clothing before reuse  
IF INHALED: Remove person to fresh air and keep comfortable for breathing. Immediately call a POISON CENTER or doctor/physician.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth  
Do NOT induce vomiting

**Precautionary Statements - Storage**

Store locked up

**Precautionary Statements - Disposal**

Dispose of contents/container to an approved waste disposal plant

**3. COMPOSITION/INFORMATION ON INGREDIENTS**

Component	CAS No	Weight-%
Zinc Bromide, Anhydrous	7699-45-8	100

**4. FIRST AID MEASURES**

**First aid measures**

**General Advice:**

National Capital Poison Center in the United States can provide assistance if you have a poison emergency and need to talk to a poison specialist. Call 1-800-222-1222. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

**Skin Contact:** Wash off immediately with soap and plenty of water. Continue flushing with plenty of water for at least 15 minutes. Remove all contaminated clothes and shoes. Immediate medical attention is required. Call a physician or Poison Control Centre immediately.

**Eye Contact:** Flush eyes with water for 15 minutes. Immediate medical attention is required. Call a physician immediately.

**Inhalation:** Move to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. **WARNING!** It may be hazardous to the person providing aid to give mouth-to-mouth resuscitation when the inhaled or ingested material is toxic, infectious or corrosive. Do not use mouth-to-mouth resuscitation if victim ingested or inhaled the substance; induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Get medical attention.

**Ingestion:** Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. If victim is conscious, give water or milk. Immediate medical attention is required.

**Most important symptoms and effects, both acute and delayed**

**Symptoms** Severe skin and eye irritation or burns  
Causes serious eye damage  
Causes conjunctivitis  
May cause swelling of the eyelids (blepharitis)  
Central nervous system effects  
May cause loss of appetite  
Vomiting  
May cause irritation of respiratory tract

**Indication of any immediate medical attention and special treatment needed**

**Notes to Physician:** Treat symptomatically.

**Protection of first-aiders**

First-Aid Providers: Avoid exposure to blood or body fluids. Wear gloves and other necessary protective clothing. Dispose of contaminated clothing and equipment as bio-hazardous waste.

**5. FIRE-FIGHTING MEASURES**

**Extinguishing Media**

**Suitable Extinguishing Media:** The product is not flammable. If it is involved in a fire, extinguish the fire using an agent suitable for the type of surrounding fire.

**Unsuitable Extinguishing Media:** No information available.

**Specific hazards arising from the chemical**

**Hazardous combustion products** No information available.

**Specific hazards** A mixture of potassium and zinc bromide produces strong explosion on impact. A mixture of sodium and zinc bromide produces strong explosion on impact.

**Special Protective Actions for Firefighters**

**Specific Methods:** No information available

**Special Protective Equipment for Firefighters:** As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent)

and full protective gear

## 6. ACCIDENTAL RELEASE MEASURES

### Personal precautions, protective equipment and emergency procedures

**Personal Precautions:** Ensure adequate ventilation. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Use personal protective equipment. Avoid contact with skin, eyes and clothing.

**Environmental precautions** Prevent further leakage or spillage if safe to do so. Prevent product from entering drains. Prevent entry into waterways, sewers, basements or confined areas.

### Methods and material for containment and cleaning up

**Methods for containment** Stop leak if you can do it without risk. Cover with plastic sheet to prevent spreading.

**Methods for cleaning up** Sweep up and shovel into suitable containers for disposal. Clean contaminated surface thoroughly.

## 7. HANDLING AND STORAGE

### Precautions for safe handling

#### **Technical Measures/Precautions:**

Provide sufficient air exchange and/or exhaust in work rooms. Keep away from incompatible materials.

#### **Safe Handling Advice**

Wear personal protective equipment. Avoid contact with skin, eyes and clothing. Keep away from heat and sources of ignition. Do not ingest. Do not breathe dust. Handle in accordance with good industrial hygiene and safety practice.

### Conditions for safe storage, including any incompatibilities

#### **Technical Measures/Storage Conditions:**

Hygroscopic. Protect from moisture. Keep container tightly closed in a dry and well-ventilated place. Store at room temperature in the original container. Store away from incompatible materials.

#### **Incompatible Materials:**

Sodium  
Potassium  
Oxidizing agents  
Strong acids  
Strong bases

## 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

### Control parameters

#### **National occupational exposure limits**

##### **United States**

Component	CAS No	OSHA	NIOSH	ACGIH	AIHA WEEL
Zinc Bromide, Anhydrous	7699-45-8	None	None	None	None

##### **Canada**

Component	CAS No	Canada - Alberta	Canada - British Columbia	Canada - Ontario	Canada - Quebec
Zinc Bromide, Anhydrous	7699-45-8	None	None	None	None

### Australia and Mexico

Component	CAS No	Australia	Mexico
Zinc Bromide, Anhydrous	7699-45-8	None	None

### Appropriate engineering controls

#### Engineering measures to reduce exposure:

Ensure adequate ventilation. Use process enclosures, local exhaust ventilation, or other engineering controls to keep airborne levels below recommended exposure limits. If user operations generate dust, fume or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### Individual protection measures, such as personal protective equipment

#### Personal Protective Equipment

##### Eye protection:

Goggles

##### Skin and body protection:

Chemical resistant apron  
Gloves  
Long sleeved clothing

##### Respiratory protection:

Effective dust mask. or. Wear respirator with dust filter. Use a dust respirator under conditions where exposure to the substance is apparent (e.g. generation of high concentration of dust (dust clouds) , inadequate ventilation, development of respiratory tract irritation), and engineering controls are not feasible. Be sure to use an approved/certified respirator or equivalent.

##### Hygiene measures:

Avoid contact with skin, eyes and clothing. Wash hands before breaks and immediately after handling the product When using, do not eat, drink or smoke.

## 9. PHYSICAL AND CHEMICAL PROPERTIES

#### Physical state:

Solid

#### Appearance:

Powder.

#### Color:

White.

#### Odor:

Odorless.

#### Taste

Sharp. Metallic.

#### Formula

ZnBr<sub>2</sub>

#### Molecular/Formula weight (g/mole):

225.21

#### Flammability (solid, gas)

no data available

#### Flashpoint (°C/°F):

No information available

#### Flash Point Tested according to:

Not available

#### Autoignition Temperature (°C/°F):

No information available

#### Lower Explosion Limit (%):

No information available

#### Upper Explosion Limit (%):

No information available

#### Melting point/range(°C/°F):

394°C/741.2°F

#### Decomposition temperature(°C/°F):

No information available

#### Boiling point/range(°C/°F):

697°C/1286.6°F

#### Bulk density:

No information available

#### Density (g/cm<sup>3</sup>):

4.3

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**Specific gravity:**  
No information available

**pH**  
No information available

**Vapor pressure @ 20°C (kPa):**  
No information available

**Evaporation rate:**  
No information available

**Vapor density:**  
No information available

**VOC content (g/L):**  
No information available

**Odor threshold (ppm):**  
No information available

**Partition coefficient  
(n-octanol/water):**  
No information available

**Viscosity:**  
No information available

**Miscibility:**  
No information available

**Solubility:**  
Very soluble in water  
Solubility in Water: 1 g soluble in 0.25 ml water  
Very soluble in Ethanol  
Soluble in Ether

## 10. STABILITY AND REACTIVITY

### Reactivity

Reactive with oxidizing agents  
A mixture of potassium and zinc chloride produces a strong explosion on impact  
A mixture of sodium and zinc bromide produces strong explosion on impact  
Reacts with strong bases  
Reactive with strong acids

### Chemical stability

**Stability:** Hygroscopic. Stable under recommended storage conditions.

**Possibility of Hazardous Reactions:** Hazardous polymerization does not occur

**Conditions to avoid:** Heat. Exposure to moisture. Exposure to moist air. Incompatible materials.

**Incompatible Materials:** Sodium  
Potassium  
Oxidizing agents  
Strong acids  
Strong bases

**Hazardous decomposition products:** No information available.

### Other Information

**Corrosivity:** No information available

**Special Remarks on Corrosivity:** No information available

## 11. TOXICOLOGICAL INFORMATION

### Information on likely routes of exposure

**Principal Routes of Exposure:**  
Ingestion. Inhalation. Skin. Eyes.

### Acute Toxicity

## Component Information

Zinc Bromide, Anhydrous	
CAS No	7699-45-8

LD50/oral/rat = 1447 mg/kg  
LD50/oral/mouse = No information available  
LD50/dermal/rabbit = >2000 mg/kg  
LD50/dermal/rat = No information available  
LC50/inhalation/rat = No information available  
LC50/inhalation/mouse = No information available  
Other LD50 or LC50 information = No information available

## Product Information

LD50/oral/rat =  
Value - Acute Tox = 1447 mg/kg

LD50/oral/mouse =  
Value - Acute Tox Oral = No information available

LD50/dermal/rabbit  
Value - Acute Tox = > 2000 mg/kg

LD50/dermal/rat  
VALUE - Acute Tox Dermal = No information available

LC50/inhalation/rat  
VALUE-Vapor = No information available  
VALUE-Gas = No information available  
VALUE-Dust/Mist = No information available

LC50/Inhalation/mouse  
VALUE-Vapor = No information available  
VALUE - Gas = No information available  
VALUE - Dust/Mist = No information available

### Symptoms

**Skin Contact:** Causes severe irritation and burns.

**Eye Contact:** Causes severe eye irritation and possible burns. May cause conjunctivitis. May cause blepharitis (inflammation of the eyelids).

**Inhalation** May cause irritation of respiratory tract.

**Ingestion** Harmful if swallowed. May cause vomiting. May affect behavior/central nervous system (ataxia). May affect behavior/central nervous system (headache, drowsiness). May affect behavior central nervous system (irritability, hallucinations, coma). May affect behavior/central nervous system (confusion).

**Aspiration hazard** No information available.

### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Chronic Toxicity** Prolonged or repeated inhalation may cause bronchitis with coughing, phlegm, and/or shortness of breath. Skin rash may occur with repeated exposure. Chronic

exposure may cause central nervous system effects. Prolonged or repeated ingestion may cause loss of appetite.

**Sensitization:** No information available.

**Mutagenic Effects:** Mutations in microorganisms  
Experiments with bacteria and/or yeast have shown mutagenic effects

**Carcinogenic effects:** May cause cancer based on animal test data.

Component	CAS No	IARC	ACGIH - Carcinogens	NTP	OSHA HCS - Carcinogens	Australia - Notifiable Carcinogenic Substances	Australia - Prohibited Carcinogenic Substances
Zinc Bromide, Anhydrous	7699-45-8	Not listed	Not listed	Not listed	Not listed	Not listed	Not listed

*ACGIH (American Conference of Governmental Industrial Hygienists)*

*IARC (International Agency for Research on Cancer)*

*NTP (National Toxicology Program)*

*OSHA (Occupational Safety and Health Administration of the US Department of Labor)*

**Reproductive toxicity** No data is available

**Reproductive Effects:** May cause adverse reproductive effects based on animal data  
**Developmental Effects:** May cause adverse developmental effects based on animal data  
**Teratogenic Effects:** May cause birth defects (teratogenic effects) based on animal test data

**Specific Target Organ Toxicity**

**STOT - single exposure** No information available.  
**STOT - repeated exposure** No information available.  
**Target Organs:** No information available.

## 12. ECOLOGICAL INFORMATION

**Ecotoxicity**

**Ecotoxicity effects:** No data available.

**Persistence and degradability:** No information available

**Bioaccumulative potential:** No information available.

**Mobility in soil** No information available  
**Other adverse effects** No information available.

## 13. DISPOSAL CONSIDERATIONS

**Disposal Methods**

**Waste from residues / unused products:**  
Waste must be disposed of in accordance with Federal, State and Local regulation.

**Contaminated packaging:**

Empty containers should be taken for local recycling, recovery or waste disposal

Component	CAS No	RCRA - F Series Wastes	RCRA - K Series Wastes	RCRA - P Series Wastes	RCRA - U Series Wastes
Zinc Bromide, Anhydrous	7699-45-8	None	None	None	None

<b>14. TRANSPORT INFORMATION</b>
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**DOT**

**UN-No:** UN3260  
**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s.(Zinc Bromide)  
**Hazard Class** 8  
**Subsidiary Class** No information available  
**Packing group:** III  
**Emergency Response Guide Number** 154  
**Marine Pollutant** Marine Pollutant  
**DOT RQ (lbs):** 1000 lbs./454 kg  
**Special Provisions** IB8, IP3, T1, TP33  
**Symbol(s):** [DOT]: (G) - Identifies proper shipping names for which one or more technical names of the hazardous material must be entered in parentheses, in association with the basic description.  
**Description:** UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III

**TDG (Canada)**

**UN-No:** UN3260  
**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s.(Zinc Bromide)  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant** No Information available  
**Description:** UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III

**ADR**

**UN Number** UN3260  
**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s.(Zinc Bromide)  
**Transport hazard class(es)** 8  
**Packing group** III  
**Subsidiary Risk:** No information available  
**Special Provisions** 274  
**Description:** UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III

**IMDG**

**UN-No:** UN3260  
**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s.(Zinc Bromide)  
**Hazard Class:** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Marine Pollutant** Marine Pollutant  
**EMS:** F-A  
**Special Provisions** 223, 274  
**Description** UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S. (ZINC BROMIDE, ANHYDROUS), 8, III

**RID**

**UN Number** UN3260

**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s.(Zinc Bromide)  
**Transport hazard class(es)** 8  
**Subsidiary Risk:** No information available  
**Packing group** III  
**Special Provisions** 274  
**Description:** UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III

**ICAO (air)**

**UN-No:** UN3260  
**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s.(Zinc Bromide)  
**Hazard Class** 8  
**Subsidiary Risk:** No information available  
**Packing Group:** III  
**Description:** UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III  
**Special Provisions** A3

**IATA**

**UN Number** UN3260  
**Proper Shipping Name:** Corrosive solid, acidic, inorganic, n.o.s.(Zinc Bromide)  
**Transport hazard class(es)** 8  
**Subsidiary Risk:** No information available  
**Packing group** III  
**Precautionary Statements - Response** 8L  
**Special Provisions** No information available  
**Description:** UN3260, CORROSIVE SOLID, ACIDIC, INORGANIC, N.O.S., 8, III

**15. REGULATORY INFORMATION**

**International Inventories**

Component	CAS No	U.S. TSCA	KOREA KECL	Philippines (PICCS)	Japan ENCS	China IECSC	Australia (AICS)	EINECS-No.
Zinc Bromide, Anhydrous	7699-45-8	PresentACTIVE	Present KE-35532	Present	Present (1)-118	Present	Present	Present 231-718-4

**U.S. Regulations**

*Zinc Bromide, Anhydrous*

- Massachusetts RTK: Present
- New Jersey RTK Hazardous Substance List: 2027
- New Jersey - Discharge Prevention - List of Hazardous Substances: Present
- Pennsylvania RTK: Environmental hazard
- Pennsylvania RTK - Environmental Hazard List Present
- New York Release Reporting - List of Hazardous Substances: 5000 lb RQ  
100 lb RQ
- Louisiana Reportable Quantity List for Pollutants: 1000lbfinal RQ  
454kgfinal RQ
- California Directors List of Hazardous Substances: Present

**California Prop. 65: Safe Drinking Water and Toxic Enforcement Act of 1986.**

**Chemicals Known to the State of California to Cause Cancer:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

**Chemicals Known to the State of California to Cause Reproductive Toxicity:**

This product does not contain a chemical requiring a warning under California Prop. 65. (See table below)

Component	CAS No	Carcinogen	Developmental Toxicity	Male Reproductive	Female Reproductive

				<b>Toxicity</b>	<b>Toxicity:</b>
Zinc Bromide, Anhydrous	7699-45-8	Not Listed	Not Listed	Not Listed	Not Listed

### CERCLA/SARA

Component	CAS No	CERCLA - Hazardous Substances and their Reportable Quantities	Section 302 Extremely Hazardous Substances and TPQs	Section 302 Extremely Hazardous Substances and RQs	Section 313 - Chemical Category	Section 313 - Reporting de minimis
Zinc Bromide, Anhydrous	7699-45-8	1000 lb final RQ 454 kg final RQ	None	None	None	None

### U.S. TSCA

Component	CAS No	TSCA Section 5(a)2 - Chemicals With Significant New Use Rules (SNURS)	TSCA 8(d) -Health and Safety Reporting
Zinc Bromide, Anhydrous	7699-45-8	Not Applicable	Not Applicable

### Canada

#### WHIMIS 2015 - GHS Classifications

WHMIS 2015 Hazard Classification Information: The WHMIS 2015 classification of this product has not been validated or reviewed yet.

**Canada Hazardous Products Regulation** This product has been classified according to the hazard criteria of the HPR (Hazardous Products Regulation) and the SDS contains all of the information required by the HPR

### DSL/NDSL

Component	CAS No	Canada (DSL)	Canada (NDSL)
Zinc Bromide, Anhydrous	7699-45-8	Present	Not Listed

Component	CAS No	CEPA Schedule I - Toxic Substances
Zinc Bromide, Anhydrous	7699-45-8	Not listed
Component	CAS No	CEPA - 2010 Greenhouse Gases Subject to Mandatory Reporting
Zinc Bromide, Anhydrous	7699-45-8	Not listed

### EU Classification

#### EU GHS - SV - CLP 1272/2008

Component	CAS No	EU GHS - SV - CLP (1272/2008)
Zinc Bromide, Anhydrous	7699-45-8	

#### EU - CLP (1272/2008)

#### R-phrase(s)

R22 - Harmful if swallowed

R34 - Causes burns

R50/53 - Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment

#### S-phrase(s)

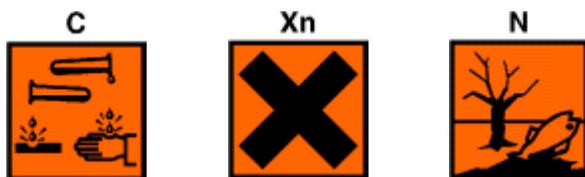
S26 - In case of contact with eyes, rinse immediately with plenty of water and seek medical advice  
 S45 - In case of accident or if you feel unwell, seek medical advice immediately (show the label where possible)  
 S60 - This material and its container must be disposed of as hazardous waste  
 S61 - Avoid release to the environment. Refer to special instructions/safety data sheets.  
 S36/37/39 - Wear suitable protective clothing, gloves and eye/face protection

Component	CAS No	Classification	Concentration Limits:	Safety Phrases
Zinc Bromide, Anhydrous	7699-45-8		No information	

**The product is classified in accordance with Annex VI to Directive 67/548/EEC**

**Indication of danger:**

C - Corrosive  
 Xn - Harmful  
 N - Dangerous for the environment



**16. OTHER INFORMATION**

Preparation Date: 11/02/2015  
 Revision date 4/9/2019  
 Prepared by: Sonia Owen

**Disclaimer:**

All chemicals may pose unknown hazards and should be used with caution. This Safety Data Sheet (SDS) applies only to the material as packaged. If this product is combined with other materials, deteriorates, or becomes contaminated, it may pose hazards not mentioned in this SDS. The physical properties reported in this SDS are obtained from the literature and do not constitute product specifications. Information contained herein does not constitute a warranty, whether expressed or implied, as to the safety, merchantability or fitness of the goods for a particular purpose. Spectrum Chemicals & Laboratory Products, Inc. assumes no responsibility for results obtained or for incidental or consequential damages, including lost profits, arising from the use of these data. No warranty against infringement of any patent, copyright or trademark is made or implied. It shall be the user's responsibility to develop proper methods of handling and personal protection based on the actual conditions of use. While this SDS is based on technical data judged to be reliable, Spectrum assumes no responsibility for the completeness or accuracy of the information contained herein.

**End of Safety Data Sheet**