

# AMMONIUM BROMIDE

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## 1. Product Identification

**Synonyms:** Hydrobromic acid monoammoniate

**CAS No.:** 12124-97-9

**Molecular Weight:** 97.95

**Chemical Formula:**  $\text{NH}_4\text{Br}$

**Product Codes:** CHEM-338 and others

## 2. Composition/Information on Ingredients

Ingredient	CAS No	Percent	Hazardous
Ammonium Bromide	12124-97-9	100%	Yes

## 3. Hazards Identification

**Emergency Overview:**

**WARNING! HARMFUL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM, BRAIN AND EYES. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.**

**SAF-T-DATA<sup>(tm)</sup> Ratings**

Health Rating: 2 - Moderate (Life)

Flammability Rating: 0 - None

Reactivity Rating: 2 - Moderate

Contact Rating: 2 - Moderate

Lab Protective Equip: GOGGLES & SHIELD; LAB COAT & APRON; VENT HOOD; PROPER GLOVES

Storage Color Code: Green (General Storage)

**Potential Health Effects**

**Inhalation:**

Dust may cause irritation to the respiratory tract. Symptoms may include coughing, sore throat, and shortness of breath.

**Ingestion:**

May cause nausea, vomiting and abdominal pain. Ingestions are usually promptly rejected by vomiting, but sufficient absorption may occur to produce central nervous system, eye and brain effects. Symptoms may include skin rash, blurred vision and other eye effects, drowsiness, irritability, dizziness, mania, hallucinations, and coma.

**Skin Contact:**

Dry material may cause mild irritation. Solutions may cause irritation, redness, pain, and skin burns.

**Eye Contact:**

May cause irritation, redness and pain.

**Chronic Exposure:**

Repeated or prolonged exposure by any route may cause skin rashes (bromaderma). Repeated ingestion of small amounts may cause central nervous system depression, including depression, ataxia, psychoses, memory loss, irritability, and headache.

**Aggravation of Pre-existing Conditions:**

Persons suffering from debilitation, depression, alcoholism, neurological or psychological disorders may be more susceptible to the effects of this compound.

## 4. First Aid Measures

**Inhalation:**

Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Call a physician.

**Ingestion:**

Induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Call a physician.

**Skin Contact:**

In case of contact, immediately flush skin with plenty of water for at least 15 minutes. Call a physician.

**Eye Contact:**

Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

## 5. Fire Fighting Measures

**Fire:**

Not considered to be a fire hazard.

**Explosion:**

Not considered an explosion hazard, but reacts explosively with bromine trifluoride.

**Fire Extinguishing Media:**

Use any means suitable for extinguishing surrounding fire. Water spray may be used to keep fire exposed containers cool.

**Special Information:**

In the event of a fire, wear full protective clothing and NIOSH-approved self-contained breathing apparatus with full facepiece operated in the pressure demand or other positive pressure mode.

## 6. Accidental Release Measures

Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8.

Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

## 7. Handling and Storage

Keep in a tightly closed container, stored in a cool, dry, ventilated area. Protect against physical damage. Isolate from acids and alkalis. Containers of this material may be hazardous when empty since they retain product residues (dust, solids); observe all warnings and precautions listed for the product.

## 8. Exposure Controls/Personal Protection

### **Airborne Exposure Limits:**

None established.

### **Ventilation System:**

A system of local and/or general exhaust is recommended to keep employee exposures as low as possible. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area. Please refer to the ACGIH document, *Industrial Ventilation, A Manual of Recommended Practices*, most recent edition, for details.

### **Personal Respirators (NIOSH Approved):**

For conditions of use where exposure to dust or mist is apparent and engineering controls are not feasible, a particulate respirator (NIOSH type N95 or better filters) may be worn. If oil particles (e.g. lubricants, cutting fluids, glycerine, etc.) are present, use a NIOSH type R or P filter. For emergencies or instances where the exposure levels are not known, use a full-face positive-pressure, air-supplied respirator. **WARNING:** Air-purifying respirators do not protect workers in oxygen-deficient atmospheres.

### **Skin Protection:**

Wear protective gloves and clean body-covering clothing.

### **Eye Protection:**

Use chemical safety goggles. Maintain eye wash fountain and quick-drench facilities in work area.

## 9. Physical and Chemical Properties

### **Appearance:**

Colorless crystals.

### **Odor:**

Odorless.

### **Solubility:**

97g/100g water @ 25°C (77°F).

### **Specific Gravity:**

2.43

### **pH:**

Slightly acidic to litmus

### **% Volatiles by volume @ 21°C (70°F):**

0

### **Boiling Point:**

Not applicable.

### **Melting Point:**

452°C (846°F)

### **Vapor Density (Air=1):**

No information found.

### **Vapor Pressure (mm Hg):**

1 @ 198°C (388°F)

**Evaporation Rate (BuAc=1):**

No information found.

## 10. Stability and Reactivity

**Stability:**

Stable under ordinary conditions of use and storage. Slightly hygroscopic; slowly becomes yellowish in air.

**Hazardous Decomposition Products:**

Emits toxic fumes of nitric oxides, ammonia, hydrogen bromide, and bromine when heated to decomposition.

**Hazardous Polymerization:**

Will not occur.

**Incompatibilities:**

Bromine trifluoride, iodine heptafluoride, potassium, and acid salts. Reacts with acids to form toxic hydrogen bromide and bases to form ammonia.

**Conditions to Avoid:**

Moisture and incompatibles.

## 11. Toxicological Information

**Toxicological Data:**

Oral rat LD50: 2700 mg/kg

Ingredient	Cancer Lists			IARC Category
	Known	Anticipated	NTP Carcinogen	
Ammonium Bromide (12124-97-9)	No	No	No	None

## 12. Ecological Information

**Environmental Fate:**

No information found.

**Environmental Toxicity:**

No information found.

## 13. Disposal Considerations

Whatever cannot be saved for recovery or recycling should be managed in an appropriate and approved waste disposal facility. Processing, use or contamination of this product may change the waste management options. State and local disposal regulations may differ from federal disposal regulations. Dispose of container and unused contents in accordance with federal, state and local requirements.

## 14. Transport Information

Not regulated.

## 15. Regulatory Information

Ingredient	Chemical Inventory Status - Part 1			
	TSCA	EC	Japan	Australia
Ammonium Bromide (12124-97-9)	Yes	Yes	Yes	Yes

## Chemical Inventory Status - Part 2

### Canada

Ingredient	Korea DSL NDSL Phil.			
Ammonium Bromide (12124-97-9)	Yes	Yes	No	Yes

### Federal, State & International Regulations - Part 1

Ingredient	SARA 302		SARA 313	
	RQ	TPQ	List	Chemical Catg.
Ammonium Bromide (12124-97-9)	No	No	No	No

### Federal, State & International Regulations - Part 2

	RCRA		TSCA	
	CERCLA	261.33	8(d)	
Ammonium Bromide (12124-97-9)	No	No	No	No

Chemical Weapons Convention: No TSCA 12(b): No CDTA: No  
SARA 311/312: Acute: Yes Chronic: Yes Fire: No Pressure: No  
Reactivity: No (Pure / Solid)

**Australian Hazchem Code:** None allocated.

**Poison Schedule:** None allocated.

#### **WHMIS:**

This MSDS has been prepared according to the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of the information required by the CPR.

## 16. Other Information

**NFPA Ratings:** Health: 2 Flammability: 0 Reactivity: 0

#### **Label Hazard Warning:**

WARNING! HARMFUL IF SWALLOWED OR INHALED. AFFECTS CENTRAL NERVOUS SYSTEM, BRAIN AND EYES. MAY CAUSE IRRITATION TO SKIN, EYES, AND RESPIRATORY TRACT.

#### **Label Precautions:**

Avoid breathing dust.

Keep container closed.

Use with adequate ventilation.

Avoid contact with eyes, skin and clothing.

Wash thoroughly after handling.

#### **Label First Aid:**

In all cases call a physician. If swallowed, induce vomiting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. In case of contact, immediately flush eyes or skin with plenty of water for at least 15 minutes.

#### **Product Use:**

Laboratory Reagent and Consumer Hobby.

#### **Revision Information:**

None

**Disclaimer:**

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