

# SAFETY DATA SHEET

Date Printed: 05/08/2024

Date Revised: 01/15/2022

## SECTION 1. IDENTIFICATION

**Product Identifier:** (4N) 99.99% Thallium Bromide

**Product Code:** TL-BR-04

**CAS Number:** 7789-40-4

**Relevant identified uses of the substance:** Scientific research and development

Supplier details:

American Elements  
10884 Weyburn Ave.  
Los Angeles, CA 90024  
Tel: +1 310-208-0551  
Fax: +1 310-208-0351  
Emergency telephone number:  
+1 800-424-9300

## SECTION 2. HAZARDS IDENTIFICATION

### 2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Class 6.1 Poison. Very toxic by ingestion with cumulative effects. Harmful in contact with skin. Toxic to aquatic organisms, may cause long term adverse effects in the aquatic environment. Particular care must be exercised when machining and creating dust or particles. Dangerous for the environment.

### 2.2. LABEL ELEMENTS



Signal Word: Danger

H300 Fatal if swallowed

H330 Fatal if inhaled

H373 May cause damage to organs through prolonged or repeated exposure.

Signal Word: Warning

H411 Toxic to aquatic life with long lasting effects

Precautionary Statements:

P260 Do not breathe dust/fume/gas/mist/vapors/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when handling this product

P273 Avoid release to the environment.

P301+P310 IF SWALLOWED: Immediately call a poison centre or doctor. Rinse mouth.

P304+P312 IF INHALED: Call a poison centre or doctor/physician if you feel unwell.

## 2.3. OTHER HAZARDS

None

---

## SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

### 3.1. SUBSTANCES

Component Name CAS number % EC number (EINECS) EU index UN number

Thallium Bromide 7789-40-4 100% 232-163-0 081-002-00-9 1707

---

## SECTION 4. FIRST AID MEASURES

### 4.1. DESCRIPTION OF FIRST AID MEASURES

GENERAL: Consult a doctor for specific advice.

EYES: Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention.

SKIN: Wash thoroughly with soap and water. Dry area with clean towel. Remove contaminated clothing and wash clothing before re-use.

INHALATION: Remove to fresh air. Perform artificial respiration if breathing has stopped. When breathing is difficult, properly trained personnel may administer oxygen. Keep affected person warm and at rest. Obtain medical attention.

INGESTION: Do not induce vomiting. Wash out mouth thoroughly with water and give 2 cups of water to drink. Do not give carbonated drinks. Never give anything by mouth to an unconscious person.

Obtain medical attention immediately.

### 4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Refer to Section 2.2 and to section 11.

### 4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No Data.

---

## SECTION 5. FIREFIGHTING MEASURES

### 5.1. EXTINGUISHING MEDIA

This product does not burn.

### 5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Material may evolve toxic fumes in a fire.

### 5.3. ADVICE FOR FIREFIGHTERS

Use breathing apparatus if necessary.

---

## SECTION 6. ACCIDENTAL RELEASE MEASURES

### 6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective clothing & equipment as listed under Section 8. Avoid making dust.

### 6.2. ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage. Do not let product enter drains. Do not discharge to the environment.

### 6.3. METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Take up and containerize for proper disposal. Containerize any cleaning materials used for proper disposal.

#### 6.4. REFERENCE TO OTHER SECTIONS

Dispose as in Section 13.

---

### SECTION 7. HANDLING AND STORAGE

#### 7.1. PRECAUTIONS FOR SAFE HANDLING:

Keep away from heat. Avoid contact with skin and eyes. Protect against physical damage. Avoid generating dust.

#### 7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep away from foodstuffs. Keep away from acids and strong bases.

#### 7.3. SPECIFIC END USES

Optical Material for Manufacture of Optical Components.

---

### SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

#### 8.1. CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL) = 0.1 mg/m<sup>3</sup> in 8 hour Time Weighted Average (TWA)

#### 8.2. EXPOSURE CONTROLS

Protective gloves made of PVA are required. Use of a laboratory coat is suggested. Safety goggles or safety glasses with side shields are required if there is any possibility of chipping or dust creation. Respirators must be worn when the threshold limit is exceeded. Provide adequate general mechanical ventilation, and local exhaust ventilation. Wash hands immediately after handling the product.

---

### SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE : Grey/clear geometric shapes, no odour. FLASH POINT: Not Applicable

BOILING POINT (760mm Hg) Not Applicable FLAMMABILITY: Not Applicable

MELTING POINT: 460°C EXPLOSIVE PROPERTIES: Not Applicable

SPECIFIC GRAVITY: 7.453 g/mL Vapor PRESSURE: Negligible at 25°C

SOLUBILITY IN WATER: 50mg/100ml H<sub>2</sub>O at 20°C pH IN AQUEOUS SOLUTION: No data available

---

### SECTION 10. STABILITY AND REACTIVITY

#### 10.1. REACTIVITY

Reacts with strong oxidising materials

#### 10.2. CHEMICAL STABILITY

Stable under normal conditions of storage and use

#### 10.3. POSSIBILITY OF HAZARDOUS REACTIONS

None known

#### 10.4. CONDITIONS TO AVOID

Can react with oxidising agents. Avoid strong acids

#### 10.5. INCOMPATIBLE MATERIALS

Strong Mineral Acids. Strong oxidising materials

#### 10.6. HAZARDOUS DECOMPOSITION PRODUCTS

Thallium, Hydrogen Bromide.

---

## **SECTION 11. TOXICOLOGICAL INFORMATION**

### **11.1. INFORMATION ON TOXICOLOGICAL EFFECTS**

Extremely toxic by ingestion, with a cumulative effect. Affects nervous system, skin and cardiovascular system. Symptoms include vomiting, muscle pains and swelling, mental confusion and insomnia, hair loss. Also harmful in contact with skin. Particular care must be exercised when machining and creating dust or particles. Inhalation of dust may irritate respiratory system.

TOXIC DOSE - LD50 >24 mg/kg (oral/mouse) CARCINOGENICITY: No evidence of carcinogenic properties.

MUTAGENICITY/TERATOGENICITY: Evidence of reproductive effects

---

## **SECTION 12. ECOLOGICAL INFORMATION**

### **12.1. TOXICITY**

Danger to drinking water. Poisonous to Fish

### **12.2. PERSISTENCE AND DEGRADABILITY**

No Data

### **12.3. BIOACCUMULATIVE POTENTIAL**

No Data

### **12.4. MOBILITY IN SOIL**

No Data

### **12.5. RESULTS OF PBT AND vPvB ASSESSMENT**

Not required or conducted

### **12.6. OTHER ADVERSE AFFECTS**

Do not allow product to reach groundwater, water courses, or sewage systems. Only release to environment with proper government permit.

---

## **SECTION 13. DISPOSAL CONSIDERATIONS**

### **13.1. WASTE TREATMENT METHODS**

Chemical residues are generally classified as special waste, and are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company.

---

## **SECTION 14. TRANSPORT INFORMATION**

### **14.1. UN NUMBER: 1707**

### **14.2. UN PROPER SHIPPING NAME:**

Thallium Compounds, N.O.S. (Thallium Bromide).

### **14.3. TRANSPORT HAZARD CLASS: 6.1**

### **14.4. PACKING GROUP: II**

### **14.5. ENVIRONMENTAL HAZARDS: Marine Pollutant**

### **14.6. SPECIAL PRECAUTIONS FOR USER: None**

### **14.7. TRANSPORT IN BULK MARPOL / IBC: No Data**

---

## **SECTION 15. REGULATORY INFORMATION**

### **15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE**

TSCA: Listed in the TSCA inventory

SARA: Listed. This product is subject to SARA section 313 reporting requirement – thallium compounds.

WHMIS: This is a controlled product under the Canadian Workplace Hazardous Materials Information System

---

## **16. OTHER INFORMATION**

Safety Data Sheet according to Regulation (EC) No. 1907/2006 (REACH). The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. American Elements shall not be held liable for any damage resulting from handling or from contact with the above product. See reverse side of invoice or packing slip for additional terms and conditions of sale. COPYRIGHT 1997-2022 AMERICAN ELEMENTS. LICENSED GRANTED TO MAKE UNLIMITED PAPER COPIES FOR INTERNAL USE ONLY.