

Revision number: 3 Revision date: 08/18/2015

IDENTIFICATION 1

Product name: Product code:

Aluminum Bromide Anhydride A2692

Product use: Restrictions on use:

> Company: TCI America 9211 N. Harborgate Street Portland, OR 97203 U.S.A. Telephone: +1-800-423-8616 / +1-503-283-1681 Fax: +1-888-520-1075 / +1-503-283-1987 e-mail: sales-US@TCIchemicals.com

2. HAZARD(S) IDENTIFICATION

OSHA Haz Com: CFR 1910.1200:

www.TCIchemicals.com

Acute Toxicity - Oral [Category 4] Skin Corrosion/Irritation [Category 1B]

Signal word:

Danger!

Hazard Statement(s):

Causes severe skin burns and eye damage Harmful if swallowed

Pictogram(s) or Symbol(s):

[Storage]



Precautionary Statement(s): Do not eat, drink or smoke when using this product. Wash hands and face thoroughly after handling. Do [Prevention] not breathe dusts or mists. Use only outdoors or in a well-ventilated area. Wear protective gloves, protective clothing, eye protection and face protection. [Response] If swallowed: Immediately call a poison center or doctor. Rinse mouth. If swallowed: Rinse mouth. Do NOT induce vomiting. If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water or 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. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Store locked up. Dispose of contents and container in accordance with US EPA guidelines for the classification and [Disposal] determination of hazardous waste listed in 40 CFR 261.3. (See Section 13)

Hazards not otherwise classified: [HNOC] May develop pressure

While this material is not classified as hazardous under OSHA, this SDS contains valuable information Supplementary Information: critical to safe handling and proper use of the product. This SDS should be retained and available for employees and other users of this product.

3. COMPOSITION/INFORMATION ON INGREDIENTS

For laboratory research purposes. Not for drug or household use.

TCI AMERICA

SAFETY DATA SHEET

Emergency telephone number: Chemical Emergencies: TCI America (8:00am - 5:00pm) PST +1-503-286-7624 Transportation Emergencies: Chemtrec 24-Hour +1-800-424-9300 (U.S.A.) +1-703-527-3887 (International) **Responsible department: TCI** America Environmental Health Safety and Security +1-503-286-7624

3. COMPOSITION/INFORMATION ON INGREDIENTS Substance/Mixture: Substance Components: Aluminum Bromid Aluminum Bromide Anhydride Percent: >95.0%(T) CAS Number: 7727-15-3 Molecular Weight: 266.69 **Chemical Formula:** AlBr₃ 4. FIRST-AID MEASURES

Inhalation:	Immediately call a poison center or doctor. Effects of exposure (inhalation) to substance may be delayed. Move victim to fresh air. Give artificial respiration if victim is not breathing. Administer oxygen if breathing is difficult. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.			
Skin contact:	For severe burns, immediate medical attention is required. Immediately call a poison center or doctor. Remove and wash contaminated clothing before re-use. Remove and isolate contaminated clothing and shoes. In case of contact with substance, immediately flush skin with running water for at least 20 minutes. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s)			
Eye contact:	involved and take precautions to protect themselves. If this chemical contacts the eyes, immediately wash (irrigate) the eyes with large amounts of water, occasionally lifting the lower and upper eyelids. Contact with material may irritate or burn eyes. If eye irritation persists get medical advice/attention. Move victim to fresh air. Check for and remove any contact lenses. Keep victim warm and quiet. Treat symptomatically and supportively. Effects of exposure to substance may be delayed. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.			
Ingestion:	Harmful if swallowed. Do not induce vomiting with out medical advice. Call a physician or Poison Control Center immediately. Do not use mouth-to-mouth method if victim ingested the substance; give artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. Loosen tight clothing such as a collar, tie, belt or waistband. If a person vomits place them in the recovery position so that vomit will not reenter the mouth and throat. Rinse mouth. Keep victim warm and quiet. Treat symptomatically and supportively. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.			
Symptoms/effects:				
Acute: Delayed:	No data available No data available			
Immediate medical attention:	WARNING: It might be hazardous to the person providing aid to give mouth-to-mouth respiration, because the inhaled material is harmful. WARNING: It might be hazardous to the person providing aid to give mouth-to-mouth respiration, because the inhaled material is corrosive. For severe burns, immediate medical attention is required. If breathing has stopped, perform artificial respiration. Use first aid treatment according to the nature of the injury. Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.			
5. FIRE-FIGHTING MEASURES				
Suitable extinguishing media:	Dry chemical, CO ₂ or water spray. Consult with local fire authorities before attempting large scale fire fighting operations.			
Specific hazards arising from the chemic	cal			
Hazardous combustion products: Other specific hazards:	None Closed containers may explode from heat of a fire.			
heated. Move containers from fire area if yo Special protective equipment for fire-figh	nters:			
	thing apparatus (SCBA). Structural fire fighters' protective clothing provides limited protection in fire situations ons. Wear chemical protective clothing which is specifically recommended by the manufacturer. It may			
6. ACCIDENTAL RELEASE MEASUF	RES			
Personal precautions:	Avoid contact with skin, eyes, and clothing. Keep people away from and upwind of spill/leak. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing (Section 8). Warn unnecessary personnel to move away. Stop leak if you can do it without risk. Ensure adequate ventilation. Isolate the hazard area and deny entry to unnecessary and unprotected personnel.			
Personal protective equipment:	Safety glasses. Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves (nitrile)			

Safety glasses. Lab coat. Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent. Wear protective gloves (nitrile).

6. ACCIDENTAL RELEASE MEASURES Emergency procedures: Provide Action Proceedings

Prevent dust cloud. In case of a spill and/or a leak, always shut off any sources of ignition, ventilate the area, and excercise caution. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Warn personnel to move away. Prevent entry into sewers, basements or confined areas; dike if needed.

Methods and materials for containment and cleaning up:

ELIMINATE all ignition sources (no smoking, flares, sparks, or flames in immediate area). Stop leak if without risk. Ventilate the area. Absorb with an inert material and put the spilled material in an appropriate waste disposal container. Use clean non-sparking tools to collect absorbed material. **Environmental precautions:**

Keep away from living quarters. Prevent further leakage or spillage if safe to do so. Water runoff can cause environmental damage. Prevent entry into sewers, basements or confined areas; dike if needed.

7. HANDLING AND STORAGE Precautions for safe handling: Precautions for safe handling: Avoid inhalation of vapor or mist. Manipulate under an adequate fume hood. Do not ingest. Avoid contact with skin and eyes. Good general ventilation should be sufficient to control airborne levels. Keep container dry. Handle and open container with care. Wear suitable protective clothing, gloves and eye/face protection. When using do not eat, drink, or smoke. Keep away from sources of ignition. Conditions for safe storage: Store locked up. Keep containers which are opened must be carefully resealed and kept upright to prevent leakage. Avoid prolonged storage periods. Store under inert gas (e.g. Argon). Moisture sensitive.

Storage incompatibilities:

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits:

No data available

Appropriate engineering controls:

Good general ventilation should be sufficient to control airborne levels. Ventilation is normally required when handling or using this product. Eyewash fountains should be provided in areas where there is any possibility that workers could be exposed to the substance. Follow safe industrial engineering/laboratory practices when handling any chemical.

Personal protective equipment	
Respiratory protection:	Dust respirator. Be sure to use a MSHA/NIOSH approved respirator or equivalent.
Hand protection:	Nitrile gloves.
Eye protection:	Safety glasses.
Skin and body protection:	Wear protective clothing (lab coat and chemical resistant boots).

Store away from oxidizing agents

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical state (20°C): Form: Color: Odor: Odor threshold:	Solid Crystal - Powder White - Reddish yellow No data available No data available			
Melting point/freezing point: Boiling point/range: Decomposition temperature: Relative density: Kinematic Viscosity:	98°C (208°F) 256°C (493°F) No data available No data available No data available	pH: Vapor pressure: Vapor density: Dynamic Viscosity:		No data available 0.13kPa/81.3°C No data available No data available
Partition coefficient: n-octanol/water (log Pow)	No data available	Evaporation rate: (Butyl Acetate = 1)		No data available
Flash point: Flammability (solid, gas):	No data available No data available	Autoignition temper Flammability or exp Lower:		No data available able
Solubility(ies):		Upper:	No data availa	able

Water: Reacts Soluble: Ether, Benzene, Toluene, Xylene

10. STABILITY AND REACTIVITY

Reactivity:

Not Available.

10. STABILITY AND REACTIVITY

Chemical Stability: Possibility of Hazardous Reactions: Conditions to avoid: Incompatible materials: Hazardous Decomposition Products:

Stable under recommended storage conditions. (See Section 7) No hazardous reactivity has been reported. Avoid excessive heat and light. Oxidizing agents No data available

ipr-rat LD50:815 mg/kg

OSHA:

No data available

11. TOXICOLOGICAL INFORMATION

RTECS Number: BD0350000

Acute Toxicity: orl-rat LD50:1598 mg/kg

Skin corrosion/irritation: No data available

Serious eye damage/irritation: No data available

Respiratory or skin sensitization: No data available

Germ cell mutagenicity: No data available

Carcinogenicity:

No data available

IARC: No data available

Reproductive toxicity:

No data available

Routes of Exposure:

Inhalation, Eye contact, Ingestion, Skin contact.

Symptoms related to exposure:

Overexposure may result in serious illness or death. Skin contact may produce burrns. Skin contact may result in inflammation; characterized by itching, scaling, reddening, or occasionally blistering.

No data available

Potential Health Effects:

No specific information available; skin and eye contact may result in irritation. May be harmful if inhaled or ingested. No data available Target organ(s):

NTP:

12. ECOLOGICAL INFORMATION

Ecotoxicity Fish: Crustacea: Algae:	No data available No data available No data available
Persistence and degradability: Bioaccumulative potential (BCF): Mobillity in soil: Partition coefficient:	No data available No data available No data available No data available
n-octanol/water (log P _{ow}) Soil adsorption (Koc): Henry's Law: constant (PaM ³ /mol)	No data available No data available

Aluminum Bromi	de Anhydride	TCI AM	ERICA	Page 5 of 0		
13. DISPOSAL	CONSIDERATION	S				
Disposal of product: Disposal of container:		rules and regulation chemical incinerat assistance but door regulatory complia Waste are listed in water ways, or the Dispose of as unu	Recycle to process if possible. It is the generator's responsibility to comply with Federal, State and Local rules and regulations. You may be able to dissolve or mix material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber system. This section is intended to provide assistance but does not replace these laws, nor does compliance in accordance with this section ensure regulatory compliance according to the law. US EPA guidelines for Identification and Listing of Hazardous Waste are listed in 40 CFR Parts 261. The product should not be allowed to enter the environment, drains water ways, or the soil. Dispose of as unused product. Do not re-use empty containers. Observe all federal, state and local regulations when disposing of the substance.			
DOT (US) UN number: UN1725	Proper Shipping Aluminium bromi		Class or Division: 8 Corrosive material	Packing Group:		
IATA UN number: UN1725	Proper Shipping Aluminium bromi		Class or Division: 8 Corrosive material	Packing Group: II		
IMDG UN number: UN1725	Proper Shipping Aluminium bromi		Class or Division: 8 Corrosive material	Packing Group: II		
EmS number:		F-A, S-B				
15. REGULATO	ORY INFORMATIO	V				
	Control Act (TSCA 8 I the EPA Toxic Subs	b.): tances Control Act (TSC	CA) inventory.			
US Federal Regu	lations					
CERCLA Hazardo SARA 313 SARA 302		eportable Quantity: Not Listed Not Listed				
State Regulation	6					
State Right-to-Kr	low					
Massachu New Jerse Pennsylva California Propos	ey ania	Not Listed Not Listed Not Listed Not Listed				
Other Information	ı					
NFPA Rating:	_		HMIS Classification:			
Health: Flammability: Instability:	0 0 0		Health: Flammability: Physical:	0 0 0		
International Inve	entories					
EC-No:		231-779-7				

16. OTHER INFORMATION

Revision date: 08/18/2015 Revision number: 3

16. OTHER INFORMATION

TCI chemicals are for research purposes only and are NOT intended for use as drugs, food additives, households, or pesticides. The information herein is believed to be correct, but does not claim to be all inclusive and should be used only as a guide. Neither the above named supplier nor any of its affiliates or subsidiaries assumes any liability whatsoever for the accuracy or completeness of the information contained herein. Final determination of suitability of any material is the sole responsibility of the user. All chemical reagents must be handled with the recognition that their chemical, physiological, toxicological, and hazardous properties have not been fully investigated or determined. All chemical reagents should be handled only by individuals who are familiar with their potential hazards and who have been fully trained in proper safety, laboratory, and chemical handling procedures. Although certain hazards are described herein, we can not guarantee that these are the only hazards which exist. Our SDS are based only on data available at the time of shipping and are subject to change without notice as new information is obtained. Avoid long storage periods since the product is subject to degradation with age and may become more dangerous or hazardous. It is the responsibility of the user to request updated SDS for products that are stored for extended periods. Disposal of unused product must be undertaken by qualified personnel who are knowledgeable in all applicable regulations and follow all pertinent safety precautions including the use of appropriate protective equipment (e.g. protective gogles, protective clothing, breathing equipment, face mask, fume hood). For proper handling and disposal, always comply with federal, state and local regulations.