

## LTS Research Laboratories, Inc. Safety Data Sheet Aluminum Indium Alloy

## 1. Product and Company Identification Trade Name: Aluminum Indium Alloy Chemical Formula: Al-In Recommended Use: Scientific research and development Manufacturer/Supplier: LTS Research Laboratories. Inc. Street: 37 Ramland Road City: Orangeburg State: New York 10962 Zip Code: Country: USA Tel #: 855-587-2436 / 855-lts-chem 24-Hour Emergency Contact: 800-424-9300 (US & Canada) +1-703-527-3887 (International) 2. Hazards Identification Signal Word: Danger Hazard Statements: H228: Flammable solid H250: Catches fire spontaneously if exposed to air H261: In contact with water releases flammable gas H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled H319: Causes serious eye irritation **Precautionary Statements:** P210: Keep away from heat/sparks/open flames/hot surfaces - No smoking P222: Do not allow contact with air P223: Keep away from any possible contact with water, because of violent reaction and possible flash fire P231+P232: Handle under inert gas. Protect from moisture P233: Keep container tightly closed P240: Ground/bond container and receiving equipment P241: Use explosion-proof electrical/ventilating/light/equipment P261: Avoid breathing dust/fume/gas/mist/vapors/spray P264: Wash face, hands, and any exposed skin thoroughly after handling P270: Do not eat, drink or smoke when using this product P271: Use only outdoors or in a well-ventilated area P280: Wear protective gloves/protective clothing/eye protection/face protection P301+P312+P330: IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth. P302+P335+P334: IF ON SKIN: Brush off loose particles from skin. Immerse in cool water/wrap in wet bandages

	<ul> <li>P304+P340+P312: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/physician if you feel unwell</li> <li>P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do. Continue rinsing</li> <li>P363: Wash contaminated clothing before reuse</li> <li>P370+P378: In case of fire: Use suitable extinguishing media for extinction</li> <li>P402+P404: Store in a dry place. Store in a closed container</li> <li>P403+P233: Store in a well-ventilated place. Keep container tightly closed</li> <li>P501: Dispose of contents/container in accordance with local/regional/national/international regulations</li> </ul>
HMIS Health Ratings (0-4):	
Health:	2
Flammability:	3
Physical:	1
	3. Composition
Chemical Family:	Alloy
Additional Names:	None
Aluminum (Al): Percentage: CAS #: EC #: Indium (In): Percentage: CAS #: EC #:	100 wt% 7429-90-5 231-072-3 100 wt% 7440-74-6 231-180-0
	4. First Aid Procedures
General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None
Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Seek medical attention.
Ingestion:	Give one to two glasses of water. Never induce vomiting or give anything by mouth to an unconscious person. Seek medical attention.
Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Immediate medical attention required.
Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Immediate attention required.

5. Firefighting Measures	
	Flammable as powder only
Extinguishing Media:	Do NOT use water for metal fires. Use dry sand, dry powder, limestone powder or approved class D extinguishers.
Spec. Fire Fighting Procedure:	Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.
	6. Accidental Release Measures
If Material Is Released/Spilled:	Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust.
Environmental Precautions:	Isolate runoff to prevent environmental pollution.
	7. Handling and Storage
Handling Conditions:	Wash thoroughly after handling.
Storage Conditions:	Store in a cool dry place in a tightly sealed container. Store apart from materials and conditions listed in section 10.
Work/Hygienic Maintenance:	Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.
Ventilation:	Provide sufficient ventilation to maintain concentration at or below threshold limit.
8.	Exposure Controls and Personal Protection
Permissible Exposure Limits:	$5 \text{ mg/m}^3$ as Al, long-term value
Permissible Exposure Limits: Threshold Limit Value:	5 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m3 as In, long-term value
Threshold Limit Value: Special Equipment:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m <sup>3</sup> as In, long-term value None
Threshold Limit Value: Special Equipment: Respiratory Protection:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m3 as In, long-term value None Dust Respirator
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m3 as In, long-term value None Dust Respirator Rubber gloves
Threshold Limit Value: Special Equipment: Respiratory Protection:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m3 as In, long-term value None Dust Respirator
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection:	<ul> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>1 mg/m<sup>3</sup> as Al, long-term value</li> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>None</li> <li>Dust Respirator</li> <li>Rubber gloves</li> <li>Safety glasses or goggles</li> <li>Protective work clothing. Wear close-toed shoes and long</li> </ul>
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m <sup>3</sup> as In, long-term value None Dust Respirator Rubber gloves Safety glasses or goggles Protective work clothing. Wear close-toed shoes and long sleeves/pants. 9. Physical and Chemical Characteristics Grey
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection: Color Form:	<ul> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>1 mg/m<sup>3</sup> as Al, long-term value</li> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>None</li> <li>Dust Respirator</li> <li>Rubber gloves</li> <li>Safety glasses or goggles</li> <li>Protective work clothing. Wear close-toed shoes and long sleeves/pants.</li> </ul> 9. Physical and Chemical Characteristics Grey Powder, Granules, Pellets, Sputtering target, Custom parts
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection: Color Form: Odor:	<ul> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>1 mg/m<sup>3</sup> as Al, long-term value</li> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>None</li> <li>Dust Respirator</li> <li>Rubber gloves</li> <li>Safety glasses or goggles</li> <li>Protective work clothing. Wear close-toed shoes and long sleeves/pants.</li> </ul> 9. Physical and Chemical Characteristics Grey Powder, Granules, Pellets, Sputtering target, Custom parts Odorless
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection: Color Form: Odor: Water Solubility:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m <sup>3</sup> as In, long-term value None Dust Respirator Rubber gloves Safety glasses or goggles Protective work clothing. Wear close-toed shoes and long sleeves/pants. 9. Physical and Chemical Characteristics Grey Powder, Granules, Pellets, Sputtering target, Custom parts Odorless Insoluble
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection: Color Form: Odor: Water Solubility: Boiling Point:	<ul> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>1 mg/m<sup>3</sup> as Al, long-term value</li> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>None</li> <li>Dust Respirator</li> <li>Rubber gloves</li> <li>Safety glasses or goggles</li> <li>Protective work clothing. Wear close-toed shoes and long sleeves/pants.</li> </ul> 9. Physical and Chemical Characteristics Grey Powder, Granules, Pellets, Sputtering target, Custom parts Odorless
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection: Color Form: Odor: Water Solubility:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m <sup>3</sup> as In, long-term value None Dust Respirator Rubber gloves Safety glasses or goggles Protective work clothing. Wear close-toed shoes and long sleeves/pants. 9. Physical and Chemical Characteristics Grey Powder, Granules, Pellets, Sputtering target, Custom parts Odorless Insoluble N/A
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection: Color Form: Odor: Water Solubility: Boiling Point: Melting Point:	<ul> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>1 mg/m<sup>3</sup> as Al, long-term value</li> <li>0.1 mg/m<sup>3</sup> as In, long-term value</li> <li>None</li> <li>Dust Respirator</li> <li>Rubber gloves</li> <li>Safety glasses or goggles</li> <li>Protective work clothing. Wear close-toed shoes and long sleeves/pants.</li> </ul> 9. Physical and Chemical Characteristics Grey Powder, Granules, Pellets, Sputtering target, Custom parts Odorless <ul> <li>Insoluble</li> <li>N/A</li> <li>N/A</li> <li>N/A</li> <li>N/A</li> </ul>
Threshold Limit Value: Special Equipment: Respiratory Protection: Protective Gloves: Eye Protection: Body Protection: Color Form: Odor: Water Solubility: Boiling Point: Melting Point: Flash Point:	0.1 mg/m <sup>3</sup> as In, long-term value 1 mg/m <sup>3</sup> as Al, long-term value 0.1 mg/m <sup>3</sup> as In, long-term value None Dust Respirator Rubber gloves Safety glasses or goggles Protective work clothing. Wear close-toed shoes and long sleeves/pants. 9. Physical and Chemical Characteristics Grey Powder, Granules, Pellets, Sputtering target, Custom parts Odorless Insoluble N/A N/A N/A

10. Reactivity		
Stability:	Pyrophoric. Stable under recommended storage conditions	
Reacts With:	Acids, Acid chlorides, Alcohols, Bases, Carbon dioxide, Halogens,	
	Halogenated compounds, Oxidizing agents, Oxygen, Water	
Incompatible Conditions:	Exposure to moisture. Exposure to air. Avoid dust formation. Excess	
r	heat. Keep away from flames and sparks.	
Hazardous Decomposition Products:	Aluminum oxide, Indium oxide	
	11. Toxicological Information	
Potential Health Effects:		
Eyes:	Causes serious eye irritation	
Skin:	Harmful if in contact with skin	
Ingestion:	Harmful if swallowed	
Inhalation:	Harmful if inhaled	
Chronic:	N/A	
Signs & Symptoms:	N/A	
Aggravated Medical Conditions:	N/A	
Median Lethal Dose:	N/A	
Carcinogen:	N/A	
	12. Ecological Information	
Aquatic Toxicity:	Low	
Persistent Bioaccumulation Toxicity:	N/A - Besearch	
Very Persistent, Very Bioaccumulative:	N/A horstories.inc.	
Notes:	N/A	
	13. Disposal Considerations	
Dispose of in accordance with local, stat	e, national, and international regulations.	
	14. Transportation Data	
Hazardous:	Hazardous as powder only	
	DANGEROUS 礎 <sup>®</sup>	
Hazard Class:	4.3 Dangerous when wet materials	
Packing Group:	II	
UN Number:	UN3208	
Proper Shipping Name:	Metallic substance, water-reactive, n.o.s. (Aluminum Indium Alloy)	
	15. Regulatory Information	
	No	
Sec 302 Extremely Hazardous: Sec 304 Reportable Quantities: Sec 313 Toxic Chemicals:	No N/A Yes	

## 16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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