



LTS Research Laboratories, Inc.  
Safety Data Sheet  
Aluminum Cobalt Alloy

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1. Product and Company Identification

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Trade Name: Aluminum cobalt alloy  
Chemical Formula: Al/Co  
Recommended Use: Scientific research and development

Manufacturer/Supplier: LTS Research Laboratories, Inc.  
Street: 37 Ramland Road  
City: Orangeburg  
State: New York  
Zip Code: 10962  
Country: USA  
Tel #: 855-587-2436 / 855-lts-chem

24-Hour Emergency Contact: 800-424-9300 (US & Canada)  
+1-703-527-3887 (International)

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2. Hazards Identification

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Signal Word: Danger



Hazard Statements: H228 Flammable solid.  
H250 Catches fire spontaneously if exposed to air.  
H261 In contact with water releases flammable gas.  
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.  
H317 May cause an allergic skin reaction.

Precautionary Statements: P210 Keep away from heat/sparks/open flames/hot surfaces – No smoking.  
P222 Do not allow contact with air.  
P231+P232: Handle under inert gas. Protect from moisture  
P363 Wash contaminated clothing before reuse.  
P342+P311 If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.  
P422 Store contents under inert gas.  
P502 Dispose of contents/container in accordance with local/regional/national/international regulations.

HMIS Health Ratings (0-4):

	Powder	Bulk
Health:	3	0
Flammability:	3	0
Physical:	2	0

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### 3. Composition

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Chemical Family: Metal alloy  
Additional Names: None

Aluminum (Al):  
Percentage: 0-100 wt%  
CAS #: 7429-90-5  
EC #: 231-072-3

Cobalt (Co):  
Percentage: 0-100 wt%  
CAS #: 7440-48-4  
EC #: 231-158-0

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### 4. First Aid Procedures

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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: Seek medical attention  
Skin: Wash affected area with mild soap and water. Seek medical attention  
Eyes: Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing

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### 5. Firefighting Measures

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Flammability: Flammable  
Extinguishing Media: Do not use water for metal fires – use CO<sub>2</sub>, sand, extinguishing powder.  
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.

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### 6. Accidental Release Measures

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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.

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### 7. Handling and Storage

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Handling Conditions: Wash thoroughly after handling.  
Storage Conditions: Store in a cool dry place in a tightly sealed container. Store under inert gas. Store apart from materials and conditions listed in section 10.  
Work/Hygienic Maintenance: Do not use tobacco or food in work area. Handle under inert gas. Protect from moisture. 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.

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## 8. Exposure Controls and Personal Protection

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Permissible Exposure Limits:	0.1 mg/m <sup>3</sup> as Co, long-term value
Threshold Limit Value:	0.02 mg/m <sup>3</sup> as Co, long-term value
Special Equipment:	None
Respiratory Protection:	Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.
Protective Gloves:	Nitrile rubber, NBR
Eye Protection:	Full face protection, Safety glasses or goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

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## 9. Physical and Chemical Characteristics

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Color:	Grey
Form:	Powder
Odor:	Odorless
Water Solubility:	powder: Contact with water liberates extremely flammable gases
Boiling Point:	N/A
Melting Point:	657-1640 °C
Flash Point:	N/A
Autoignition Temperature:	~400 °C for powders
Density:	N/A
Molecular weight:	undefined

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## 10. Reactivity

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Stability:	Stable under recommended storage conditions
Reacts With:	N/A
Incompatible Conditions:	Air, water, moisture, Oxidizing agents
Hazardous Decomposition Products:	Metal oxide fume

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## 11. Toxicological Information

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Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause allergic skin reaction
Ingestion:	May cause irritation
Inhalation:	May cause irritation
Chronic:	N/A
Signs & Symptoms:	N/A
Aggravated Medical Conditions:	N/A
Median Lethal Dose:	6171 mg/kg for rat by mouth
Carcinogen:	IARC-2B: Possibly carcinogenic to humans: limited evidence in human in the absence of sufficient evidence in experimental animals. ACGIH A3: Animal carcinogen: Agent is carcinogenic in experimental animals at a relatively high dose, by routes of administration, at sites, of histologic types, or by mechanisms not considered relevant to worker exposure. Available epidemiologic studies do not confirm an increased risk of cancer in exposed humans. Available evidence suggests that the agent is not likely to cause cancer in humans except under uncommon or unlikely routes or level of exposure.

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## 12. Ecological Information

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Aquatic Toxicity:	Low
Persistent Bioaccumulation Toxicity:	No
Very Persistent, Very Bioaccumulative:	No
Notes:	N/A

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## 13. Disposal Considerations

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Dispose of in accordance with local, state, national, and international regulations.

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## 14. Transportation Data

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Hazardous: Hazardous as powder only.



Hazard Class:	4.3 Substances which, in contact with water, emit flammable gases
Subclass:	4.1 Flammable solids
Packing Group:	II
UN Number:	UN3132
Proper Shipping Name:	Water-reactive solid-flammable, n.o.s. (Aluminum cobalt powder)

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## 15. Regulatory Information

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Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	Yes, Al, Co

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## 16. Other Information

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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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