



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

1. Product and Company Identification

Trade Name: Cobalt titanium aluminum
Chemical Formula: Co-Ti-Al
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

Emergency Contact (ChemTrec) Tel #: 800-424-9300 (US & Canada)
+1-703-527-3887 (International)

2. Hazards Identification

Signal Word: Danger



Hazard Statements: H251 Self-heating: may catch fire (if powder)
H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled
H317 May cause an allergic skin reaction

Precautionary Statements: P280 Wear protective gloves/clothing/eyewear/facewear
P210+P235+P410 Keep Cool. Protect from sunlight and heat/sparks/flames. No smoking. (If powder)
P420 Store away from other materials
P261 Avoid breathing dust/fume

HMIS Health Ratings (0-4):
Health: 1
Flammability: 1 (3 if powder)
Reactivity: 2

3. Composition

Chemical Family: Metal Alloy
Additional Names: N/A

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

Titanium (Ti):
Percentage: 0-100 wt%
CAS #: 7440-32-6
EC #: 231-142-3

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

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.
Ingestion: Give one to two glasses of water and induce vomiting. Never induce vomiting or give anything by mouth to an unconscious person.

Skin: Wash affected area with mild soap and water. Remove any contaminated clothing.

Eyes: Flush eyes with water, blinking often for ten minutes.

5. Fire and explosion hazards data

Flammability: Non-flammable, except as powder
Flash Point: N/A
Autoignition Temperature: N/A

Extinguishing Media: Do not use water for metal fires. Use sand/CO₂/dry extinguishing agent.

Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes.

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.
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 TLV.

8. Exposure Controls / Personal Protection

Permissible Exposure Limits:	0.1 mg/m ³ as Co (OSHA)
Threshold Limit Value:	0.02 mg/m ³ as Co (ACGIH)
Special Equipment:	None
Respiratory Protection:	Dust Respirator, NIOSH approved
Protective Gloves:	Rubber gloves
Eye Protection:	Safety glasses / goggles
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color	Metallic grey, dark to medium
Form:	Powder, Granules, Pellets, Sputtering target, Custom parts
Odor:	Odorless
Water Solubility:	May emit flammable gas
Boiling Point:	N/A
Melting Point:	660 °C (as aluminum)
Density:	N/A
Molecular weight:	N/A

10. Reactivity

Stability:	Stable under recommended storage conditions
Reacts With:	Oxidizing agents, Acids, Bases, Water, Air
Incompatible Conditions:	Moisture, Heat
Haz. Decomposition Products:	Metal oxide fume

11. Toxicological Information

Potential Health Effects:	
Eyes:	May cause irritation
Skin:	May cause allergic reaction
Ingestion:	Low toxicity by ingestion
Inhalation:	May cause allergy or asthma symptoms
Chronic:	N/A
Routes of Entry:	Inhalation, skin, eyes, and ingestion.
Target Organs:	N/A
Signs & Symptoms of Exposure:	N/A
Medical Conditions Aggravated by Exposure:	N/A
Median Lethal Dose:	N/A
Carcinogen:	Classified as a possible carcinogen by IARC and ACGIH

12. Ecological Information

Ecological data is not available.

13. Disposal Considerations

Dispose of in accordance with local, state and federal regulations.

14. Transportation Data

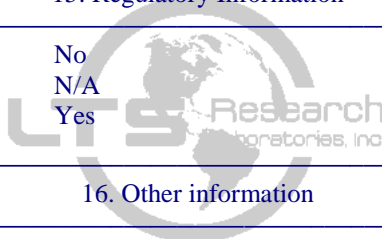
Hazardous: Hazardous as powder only



Hazard Class: 4.1 Flammable Solid
Packing Group: III
UN Number: UN3089
Proper Shipping Name: Metal powders, flammable, n.o.s.

15. Regulatory Information

Sec 302 Extremely Hazardous: No
Sec 304 Reportable Quantities: N/A
Sec 313 Toxic Chemicals: 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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