**Cobalt Aluminate Nanoparticles**

**Cobalt Aluminate Sputtering Target**

**Cobalt Aluminum Oxide Nanoparticle Dispersion**

**Cobalt Aluminum Oxide Nanoparticles / Nanopowder**

**Cobalt(II) Aluminate**

<table>
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<tr>
<th>Linear Formula</th>
<th>CoAl$_2$O$_4$</th>
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<tr>
<td>MDL Number</td>
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<td>EC No.</td>
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<td>IUPAC Name</td>
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<td>Beilstein/Reaxys No.</td>
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<td>Hazard Statements</td>
<td>H315-H317-H319-H335-H351</td>
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<td>Transport Information</td>
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**SAFETY DATA SHEET**

**Date Accessed:** 07/01/2020  
**Date Revised:** 05/15/2015
SECTION 1. IDENTIFICATION

Product Identifiers: All applicable American Elements product codes for CAS #1333-88-6

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:
Domestic, North America +1 800-424-9300
International +1 703-527-3887

SECTION 2. HAZARDS IDENTIFICATION

Statements of Hazard: Irritant, Skin sensitizer
Acute Health Hazard: Irritant to eyes, skin, mucous membranes and respiratory system. May be harmful by ingestion, inhalation or skin absorption.
Chronic Health Hazard: Target organ effect, Carcinogen

HMIS Rating: H:2 F:0 P:0
NFPA Rating: H:2 F:0 R:0

To the best of our knowledge, the toxicological properties of this chemical have not been thoroughly investigated. Use appropriate procedures and precautions to prevent or minimize exposure.

Pictogram:

Signal Word: Warning
Hazard Statement(s): H302 Harmful if swallowed.
H312 Harmful in contact with skin.
H317 May cause an allergic skin reaction.
H319 Causes serious eye irritation.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H351 suspected of causing cancer.

Precautionary Statement(s): P261 Avoid breathing dust/ fume/ gas/ mist/ vapors/ spray.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312 IF SWALLOWED: Call a POISON
SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name: Cobalt aluminate Tech. Grade
Synonyms: Not Available
CAS Number: 1333-88-6
MDL Number: MFCD00016016
EINECS Number: 215-610-4
Belstein Registry Number: Not Available
Molecular Formula: CoAl2O4
Molecular Weight: 176.89
Content: 95 - 100%
Notes: Not Available

SECTION 4. FIRST AID MEASURES

Eye Contact: Flush eyes with large amounts of water for fifteen minutes. Separate eyelids with fingers. If irritation persists, seek medical attention.
Skin Contact: Wash skin with soap and water. If irritation persists, seek medical attention.
Ingestion: Do not induce vomiting. Seek medical attention.
Inhalation: Move to a fresh air environment. Contact a physician if breathing becomes difficult.

SECTION 5. FIREFIGHTING MEASURES

Flash Point: Not Available
Explosion Limits: Lower: Not Available
Upper: Not Available
Autoignition: Not Available
Extinguishing Media: Carbon dioxide, dry chemical
powder, alcohol-resistant foam or water spray.  
Protective Equipment: Wear self-contained respirator and fully protective impervious suit.  
Specific Hazards: May emit hazardous fumes under fire conditions.

SECTION 6. ACCIDENTAL RELEASE MEASURES

Personal Protection: Wear a self-contained breathing apparatus, rubber boots and gloves, and disposable coveralls. Dispose of coveralls after use.  
Keep unprotected persons away.  
Environmental Protection: Keep spills out of sewers and bodies of water. Dike and contain the spill with inert material. Absorb on sand, vermiculite or diatomite. Transfer material to a container for disposal or recovery. Ventilate area and wash spill site after material pickup is complete.

SECTION 7. HANDLING AND STORAGE

Handling: Avoid breathing dust, vapor, mist or gas. Avoid contact with skin and eyes. Avoid prolonged or repeated exposure. Use only in a chemical fume hood. Open and handle container with care. Keep ignition sources away.  
Storage: Store in a tightly closed container in a dry, well-ventilated place.  
Sensitivities: Not Available  
Storage Temperature: 15 – 30 ºC

SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Eyes: Wear appropriate protective eyeglass or chemical safety goggles. Make sure that there is an eyewash facility in your vicinity.  
Skin: Wear impervious gloves and protective clothing.  
Respiratory: Use a NIOSH approved respirator when exposure limits are exceeded or if irritation or other symptoms are experienced.
SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance: Solid  
Odor: Not Available  
Melting Point: 660 ºC  
Boiling Point: 2467 ºC  
pH Value: Not Available  
Density: Not Available  
Refractive Index, n20 D: Not Available  
Viscosity: Not Available  
Solubility in Water: Not Available  
Vapor Pressure: Not Available  
Vapor Density (Air=1): Not Available

SECTION 10. STABILITY AND REACTIVITY

Stability: Stable under normal temperatures and pressures.  
Incompatibility: Strong oxidizing agents.  
Conditions to Avoid: Heat, Flame, Sparks, Other ignition sources  
Hazardous Decomposition Products: Aluminum oxides, Cobalt oxides.

SECTION 11. TOXICOLOGICAL INFORMATION

RTECS Reference: Not Available  
Target Organs: Lungs, Blood, Thyroid  
Toxicity Data: Not Available  
Skin corrosion/irritation: Not Available  
Serious eye damage/irritation: Not Available  
Carcinogenicity: Not Available

SECTION 12. ECOLOGICAL INFORMATION

Toxicity: Not Available  
Persistence and degradability: Not Available  
Bioaccumulative potential: Not Available  
Mobility in soil: Not Available  
PBT and vPvB assessment: Not Available
Other adverse effects: Not Available

SECTION 13. DISPOSAL CONSIDERATIONS

Contact a licensed professional waste disposal service. Dispose in a manner consistent with federal, state and local environmental regulations.

SECTION 14. TRANSPORT INFORMATION

DOT: Not Regulated
IATA: Not Regulated
IMDG: Not Regulated

SECTION 15. REGULATORY INFORMATION

United States:
Toxic Substance Control Act (TSCA): Listed
Superfund Amendments and Reauthorization Act (SARA 302): Not listed
Superfund Amendments and Reauthorization Act (SARA 311/312): Not listed
Superfund Amendments and Reauthorization Act (SARA 313): Not listed

European Union:
European Inventory of Existing Chemical Substances (EINECS): No. 200-755-8
Hazard Codes: Xn
Risk Statements: 36/37/38-40-43-53
Safety Statements: 22-26-37/39-45

Canada
Canadian Domestic Substances List (DSL): Listed
Canadian Domestic Substances List (NDSL): Not listed

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
Research