

**SAFETY DATA SHEET**

Creation Date 22-Sep-2009

Revision Date 17-Dec-2020

Revision Number 4

**1. Identification**

**Product Name** Cobalt rod

**Cat No. :** 00081

**CAS-No** 7440-48-4

**Synonyms** No information available

**Recommended Use** Laboratory chemicals.

**Uses advised against** Food, drug, pesticide or biocidal product use.

**Details of the supplier of the safety data sheet**

**Company**

Alfa Aesar  
Thermo Fisher Scientific Chemicals, Inc.  
30 Bond Street  
Ward Hill, MA 01835-8099  
Tel: 800-343-0660  
Fax: 800-322-4757  
**Email:** tech@alfa.com  
www.alfa.com

**Emergency Telephone Number**

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660.  
After normal business hours, call Carechem 24 at (866) 928-0789.

**2. Hazard(s) identification****Classification**

This chemical is considered hazardous by the 2012 OSHA Hazard Communication Standard (29 CFR 1910.1200)

Acute oral toxicity	Category 4
Respiratory Sensitization	Category 1B
Skin Sensitization	Category 1
Germ Cell Mutagenicity	Category 2
Carcinogenicity	Category 1B
Reproductive Toxicity	Category 1B

**Label Elements**

**Signal Word**  
Danger

**Hazard Statements**

Harmful if swallowed

May cause an allergic skin reaction

May cause allergy or asthma symptoms or breathing difficulties if inhaled

Suspected of causing genetic defects

May cause cancer by inhalation

May damage fertility

**Precautionary Statements****Prevention**

Obtain special instructions before use

Do not handle until all safety precautions have been read and understood

Use personal protective equipment as required

Wash face, hands and any exposed skin thoroughly after handling

Do not eat, drink or smoke when using this product

Avoid breathing dust/fume/gas/mist/vapors/spray

In case of inadequate ventilation wear respiratory protection

Contaminated work clothing should not be allowed out of the workplace

Wear protective gloves

**Response**

IF exposed or concerned: Get medical attention/advice

**Inhalation**

IF INHALED: If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing

If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician

**Skin**

IF ON SKIN: Wash with plenty of soap and water

If skin irritation or rash occurs: Get medical advice/attention

Wash contaminated clothing before reuse

**Ingestion**

IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell

Rinse mouth

**Storage**

Store locked up

**Disposal**

Dispose of contents/container to an approved waste disposal plant

**Hazards not otherwise classified (HNOC)**

Harmful to aquatic life with long lasting effects

WARNING. Cancer - <https://www.p65warnings.ca.gov/>.

### 3. Composition/Information on Ingredients

Component	CAS-No	Weight %
Cobalt, massive	7440-48-4	<=100

### 4. First-aid measures

**General Advice**

If symptoms persist, call a physician.

**Eye Contact**

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get medical attention.

<b>Skin Contact</b>	Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
<b>Inhalation</b>	Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
<b>Ingestion</b>	Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.
<b>Most important symptoms and effects</b>	None reasonably foreseeable. . May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause allergic skin reaction. Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing
<b>Notes to Physician</b>	Treat symptomatically

## 5. Fire-fighting measures

**Suitable Extinguishing Media** approved class D extinguishers.

**Unsuitable Extinguishing Media** Water may be ineffective

**Flash Point** Not applicable  
**Method -** No information available

**Autoignition Temperature** No information available

**Explosion Limits**

**Upper** No data available

**Lower** No data available

**Sensitivity to Mechanical Impact** No information available

**Sensitivity to Static Discharge** No information available

### Specific Hazards Arising from the Chemical

Keep product and empty container away from heat and sources of ignition.

### Hazardous Combustion Products

Cobalt oxides.

### Protective Equipment and Precautions for Firefighters

As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear.

### NFPA

**Health**  
3

**Flammability**  
2

**Instability**  
0

**Physical hazards**  
N/A

## 6. Accidental release measures

**Personal Precautions** Ensure adequate ventilation. Use personal protective equipment as required. Avoid dust formation. No special precautions required.

**Environmental Precautions** Should not be released into the environment. Do not flush into surface water or sanitary sewer system. Do not allow material to contaminate ground water system.

**Methods for Containment and Clean Up** Sweep up and shovel into suitable containers for disposal. Keep in suitable, closed containers for disposal. Pick up and transfer to properly labelled containers.

## 7. Handling and storage

**Handling** Ensure adequate ventilation. Wear personal protective equipment/face protection. Do not get in eyes, on skin, or on clothing. Avoid ingestion and inhalation. Avoid dust formation.

**Storage**

Keep in a dry place. Keep away from acids.

**8. Exposure controls / personal protection****Exposure Guidelines**

Component	ACGIH TLV	OSHA PEL	NIOSH IDLH	Mexico OEL (TWA)
Cobalt, massive	TWA: 0.02 mg/m <sup>3</sup>	(Vacated) TWA: 0.05 mg/m <sup>3</sup> TWA: 0.1 mg/m <sup>3</sup>	IDLH: 20 mg/m <sup>3</sup> TWA: 0.05 mg/m <sup>3</sup>	TWA: 0.02 mg/m <sup>3</sup>

**Legend**

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH IDLH: NIOSH - National Institute for Occupational Safety and Health

**Engineering Measures**

Ensure that eyewash stations and safety showers are close to the workstation location.  
Ensure adequate ventilation, especially in confined areas. None under normal use conditions.

**Personal Protective Equipment****Eye/face Protection**

Wear appropriate protective eyeglasses or chemical safety goggles as described by OSHA's eye and face protection regulations in 29 CFR 1910.133 or European Standard EN166.

**Skin and body protection**

Wear appropriate protective gloves and clothing to prevent skin exposure.

**Respiratory Protection**

No special protective equipment required.

**Hygiene Measures**

Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties**

Physical State	Solid
Appearance	Grey
Odor	Odorless
Odor Threshold	No information available
pH	No information available 4444
Melting Point/Range	1495 °C / 2723 °F
Boiling Point/Range	2870 °C / 5198 °F
Flash Point	Not applicable
Evaporation Rate	Not applicable
Flammability (solid,gas)	No information available
Flammability or explosive limits	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	Not applicable
Specific Gravity	8.92
Solubility	Insoluble in water
Partition coefficient; n-octanol/water	No data available
Autoignition Temperature	No information available
Decomposition Temperature	No information available
Viscosity	Not applicable
Molecular Formula	Co
Molecular Weight	58.9332

**10. Stability and reactivity**

<b>Reactive Hazard</b>	None known, based on information available
<b>Stability</b>	Stable under normal conditions.
<b>Conditions to Avoid</b>	Incompatible products.
<b>Incompatible Materials</b>	Strong oxidizing agents
<b>Hazardous Decomposition Products</b>	Cobalt oxides
<b>Hazardous Polymerization</b>	Hazardous polymerization does not occur.
<b>Hazardous Reactions</b>	None under normal processing.

## 11. Toxicological information

### Acute Toxicity

#### Product Information Component Information

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cobalt, massive	6171 mg/kg (Rat) 550 mg/kg (Rat)	Not listed	LC50 > 10 mg/L ( Rat ) 1 h

**Toxicologically Synergistic Products** No information available

#### Delayed and immediate effects as well as chronic effects from short and long-term exposure

**Irritation** Severe eye irritant

**Sensitization** No information available

**Carcinogenicity** This product contains one or more substances which are classified by IARC as carcinogenic to humans (Group I), probably carcinogenic to humans (Group 2A) or possibly carcinogenic to humans (Group 2B). The table below indicates whether each agency has listed any ingredient as a carcinogen.

Component	CAS-No	IARC	NTP	ACGIH	OSHA	Mexico
Cobalt, massive	7440-48-4	Group 2B	Reasonably Anticipated	A3	X	A3

*IARC (International Agency for Research on Cancer)*

*NTP: (National Toxicity Program)*

*ACGIH: (American Conference of Governmental Industrial Hygienists)*

*Mexico - Occupational Exposure Limits - Carcinogens*

*Group 2B - Possibly Carcinogenic to Humans*  
*IARC (International Agency for Research on Cancer)*  
*Group 1 - Carcinogenic to Humans*  
*Group 2A - Probably Carcinogenic to Humans*  
*NTP: (National Toxicity Program)*  
*Known - Known Carcinogen*  
*Reasonably Anticipated - Reasonably Anticipated to be a Human Carcinogen*  
*A3 - Animal Carcinogen*  
*A1 - Known Human Carcinogen*  
*A2 - Suspected Human Carcinogen*  
*ACGIH: (American Conference of Governmental Industrial Hygienists)*  
*A3 - Confirmed Animal Carcinogen*  
*Mexico - Occupational Exposure Limits - Carcinogens*  
*A1 - Confirmed Human Carcinogen*  
*A2 - Suspected Human Carcinogen*  
*A4 - Not Classifiable as a Human Carcinogen*  
*A5 - Not Suspected as a Human Carcinogen*

**Mutagenic Effects** No information available

**Reproductive Effects** Product is or contains a chemical which is a known or suspected reproductive hazard.

**Developmental Effects** No information available.

**Teratogenicity** No information available.

**STOT - single exposure** None known  
**STOT - repeated exposure** None known

**Aspiration hazard** No information available

**Symptoms / effects, both acute and delayed** Symptoms of allergic reaction may include rash, itching, swelling, trouble breathing, tingling of the hands and feet, dizziness, lightheadedness, chest pain, muscle pain or flushing

**Endocrine Disruptor Information** No information available

**Other Adverse Effects** The toxicological properties have not been fully investigated.

## 12. Ecological information

### Ecotoxicity

May cause long-term adverse effects in the environment. Do not allow material to contaminate ground water system. Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment. The product contains following substances which are hazardous for the environment.

Component	Freshwater Algae	Freshwater Fish	Microtox	Water Flea
Cobalt, massive	Not listed	LC50: > 100 mg/L, 96h static (Brachydanio rerio)	Not listed	Not listed

**Persistence and Degradability** May persist

**Bioaccumulation/ Accumulation** No information available.

**Mobility** Is not likely mobile in the environment due its low water solubility.

Component	log Pow
Cobalt, massive	5

## 13. Disposal considerations

**Waste Disposal Methods** Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations to ensure complete and accurate classification.

## 14. Transport information

**DOT** Not regulated  
**TDG** Not regulated  
**IATA** Not regulated  
**IMDG/IMO** Not regulated

## 15. Regulatory information

### United States of America Inventory

Component	CAS-No	TSCA	TSCA Inventory notification - Active/Inactive	TSCA - EPA Regulatory Flags
Cobalt, massive	7440-48-4	X	ACTIVE	-

### **Legend:**

**TSCA** - Toxic Substances Control Act, (40 CFR Part 710)

X - Listed

'-' - Not Listed

**TSCA 12(b)** - Notices of Export Not applicable

**International Inventories**

Canada (DSL/NDL), Europe (EINECS/ELINCS/NLP), Philippines (PICCS), Japan (ENCS), Australia (AICS), China (IECSC), Korea (ECL).

Component	CAS-No	DSL	NDSL	EINECS	PICCS	ENCS	AICS	IECSC	KECL
Cobalt, massive	7440-48-4	X	-	231-158-0	X	X	X	X	KE-06060

**U.S. Federal Regulations****SARA 313**

Component	CAS-No	Weight %	SARA 313 - Threshold Values %
Cobalt, massive	7440-48-4	<=100	0.1

**SARA 311/312 Hazard Categories** See section 2 for more information

**CWA (Clean Water Act)** Not applicable

**Clean Air Act**

**OSHA - Occupational Safety and Health Administration** Not applicable

**CERCLA** Not applicable

**California Proposition 65** This product contains the following Proposition 65 chemicals.

Component	CAS-No	California Prop. 65	Prop 65 NSRL	Category
Cobalt, massive	7440-48-4	Carcinogen	-	Carcinogen

**U.S. State Right-to-Know Regulations**

Component	Massachusetts	New Jersey	Pennsylvania	Illinois	Rhode Island
Cobalt, massive	X	X	X	X	X

**U.S. Department of Transportation**

Reportable Quantity (RQ): N  
 DOT Marine Pollutant N  
 DOT Severe Marine Pollutant N

**U.S. Department of Homeland Security** This product does not contain any DHS chemicals.

**Other International Regulations**

**Mexico - Grade** No information available

## 16. Other information

**Prepared By** Health, Safety and Environmental Department  
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 www.alfa.com

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**Revision Summary** SDS authoring systems update, replaces ChemGes SDS No. 7440-48-4/5.

**Disclaimer**

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage,

transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text

**End of SDS**