

# Safety Data Sheet

According to Canadian Hazardous Products Regulations and WHMIS 2015

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**Cobalt, Metal Pieces**

## SECTION 1: Identification

### Product identifier

**Product name:** Cobalt, Metal Pieces

**Product code:** S25256

### Recommended use of the product and restriction on use

**Relevant identified uses:** Not determined or not applicable.

**Uses advised against:** Not determined or not applicable.

**Reasons why uses advised against:** Not determined or not applicable.

### Manufacturer or supplier details

**Manufacturer:**

AquaPhoenix Scientific  
860 Gitts Run Road  
Hanover  
PA 17331  
(717) 632-1291

**Supplier:**

Fisher Science Education  
6771 Silver Crest Road  
Nazareth  
PA 18064  
800 955-1177

### Emergency telephone number:

**United States**

Emergency Telephone No.: 800-255-3924

## SECTION 2: Hazard identification

### GHS classification:

Skin sensitization, category 1

Respiratory sensitization, category 1

Chronic aquatic hazard, category 4

### Label elements

**Hazard pictograms:**



**Signal word:** Danger

### Hazard statements:

H317 May cause an allergic skin reaction

H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled

H410 Very toxic to aquatic life with long lasting effects

H413 May cause long lasting harmful effects to aquatic life

### Precautionary statements:

P261 Avoid breathing dust/fume/gas/mist/vapors/spray

P272 Contaminated work clothing should not be allowed out of the workplace

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P280 Wear protective gloves/protective clothing/eye protection/face protection  
P285 In case of inadequate ventilation wear respiratory protection  
P273 Avoid release to the environment  
P321 Specific treatment (see supplemental first aid instructions on this label).  
P363 Wash contaminated clothing before reuse  
P302+P352 If on skin: Wash with soap and water  
P333+P313 If skin irritation or a rash occurs: Get medical advice/attention  
P304+P341 If inhaled: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing  
P391 Collect spillage  
P501 Dispose of contents and container as instructed in Section 13

**Hazards not otherwise classified:** None

## SECTION 3: Composition/information on ingredients

Identification	Name	Weight %
CAS number: 7440-48-4	Cobalt, Metal pieces	>98

**Additional Information:** None

## SECTION 4: First-aid measures

### Description of first-aid measures

#### General notes:

Not determined or not available.

#### After inhalation:

Loosen clothing as necessary and position individual in a comfortable position  
Maintain an unobstructed airway  
Get medical advice/attention if you feel unwell

#### After skin contact:

Rinse affected area with soap and water  
If symptoms develop or persist, seek medical attention

#### After eye contact:

Rinse/flush exposed eye(s) gently using water for 15-20 minutes  
If symptoms develop or persist, seek medical attention

#### After ingestion:

Rinse mouth thoroughly  
Seek medical attention if irritation, discomfort, or vomiting persists

### Most important symptoms and effects, both acute and delayed

#### Acute symptoms and effects:

Not determined or not available.

#### Delayed symptoms and effects:

Not determined or not available.

### Immediate medical attention and special treatment

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### Specific treatment:

Not determined or not available.

### Notes for the doctor:

Not determined or not available.

## SECTION 5: Fire-fighting measures

### Extinguishing media

#### Suitable extinguishing media:

Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition

#### Unsuitable extinguishing media:

Not determined or not applicable.

### Specific hazards during fire-fighting:

Thermal decomposition can lead to release of irritating gases and vapors

### Special protective equipment for firefighters:

Use typical firefighting equipment, self-contained breathing apparatus, special tightly sealed suit

### Special precautions:

Carbon monoxide and carbon dioxide may form upon combustion

Heating causes a rise in pressure, risk of bursting and combustion

## SECTION 6: Accidental release measures

### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation

Ensure air handling systems are operational

Wear protective eye wear, gloves and clothing

### Environmental precautions:

Should not be released into the environment

Prevent from reaching drains, sewer or waterway

### Methods and material for containment and cleaning up:

Wear protective eye wear, gloves and clothing

Sweep or scoop up solid material while minimizing dust generation

Dispose of contents / container in accordance with local regulations

### Reference to other sections:

Not determined or not applicable.

## SECTION 7: Handling and storage

### Precautions for safe handling:

Use only with adequate ventilation.

Avoid breathing dust.

Do not eat, drink, smoke or use personal products when handling chemical substances.

### Conditions for safe storage, including any incompatibilities:

Keep container tightly sealed.

Keep container dry.

Store in a cool, well-ventilated area.

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### SECTION 8: Exposure controls/personal protection

Only those substances with limit values have been included below.

#### Occupational Exposure limit values:

Country (Legal Basis)	Substance	Identifier	Permissible concentration
NIOSH	Cobalt, Metal pieces	7440-48-4	NIOSH REL (TWA): 0.05 mg/m <sup>3</sup>
United States (OSHA)	Cobalt, Metal pieces	7440-48-4	OSHA PEL (TWA): 0.1 mg/m <sup>3</sup>
ACGIH	Cobalt, Metal pieces	7440-48-4	ACGIH TLV (TWA): 0.02 mg/m <sup>3</sup> ; confirmed animal carcinogen with unknown relevance to humans

#### Biological limit values:

No biological exposure limits noted for the ingredient(s).

#### Information on monitoring procedures:

Monitoring of the concentration of substances in the breathing zone of workers or in the general workplace may be required to confirm compliance with an OEL and adequacy of exposure controls.

Biological monitoring may also be appropriate for some substances.

#### Appropriate engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling.

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

#### Personal protection equipment

##### Eye and face protection:

Safety goggles or glasses, or appropriate eye protection.

##### Skin and body protection:

Select glove material impermeable and resistant to the substance.

Wear appropriate clothing to prevent any possibility of skin contact.

##### Respiratory protection:

If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.

#### General hygienic measures:

Avoid contact with skin, eyes and clothing.

Wash hands before breaks and at the end of work.

Wash contaminated clothing before reuse.

### SECTION 9: Physical and chemical properties

#### Information on basic physical and chemical properties

Appearance (physical state, color):	Gray, hard, magnetic, ductile, pieces
Odor:	Odorless
Odor threshold:	Not determined
pH-value:	Not determined

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<b>Melting/Freezing point:</b>	1495°C
<b>Boiling point/range:</b>	2870°C
<b>Flash point:</b>	Not determined
<b>Evaporation rate:</b>	Not determined
<b>Flammability (solid, gaseous):</b>	Not determined
<b>Explosion limit upper:</b>	Not determined
<b>Explosion limit lower:</b>	Not determined
<b>Vapor pressure:</b>	Not determined
<b>Vapor density:</b>	Not determined
<b>Density:</b>	8.9g/cm <sup>3</sup> at 20°C
<b>Relative density:</b>	Not determined
<b>Solubilities:</b>	Insoluble in water
<b>Partition coefficient (n-octanol/water):</b>	Not determined
<b>Auto/Self-ignition temperature:</b>	Not determined
<b>Decomposition temperature:</b>	Not determined
<b>Dynamic viscosity:</b>	Not determined
<b>Kinematic viscosity:</b>	Not determined
<b>Explosive properties</b>	Not determined
<b>Oxidizing properties</b>	Not determined

### Other information

## SECTION 10: Stability and reactivity

#### Reactivity:

Does not react under normal conditions of use and storage.

#### Chemical stability:

Stable under normal conditions of use and storage.

#### Possibility of hazardous reactions:

None under normal conditions of use and storage.

#### Conditions to avoid:

None known.

#### Incompatible materials:

None known.

#### Hazardous decomposition products:

None known.

## SECTION 11: Toxicological information

### Acute toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

#### Substance data:

Name	Route	Result
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Name	Route	Result
Cobalt, Metal pieces	oral	LD50 - Rat - 550 mg/kg

### Skin corrosion/irritation

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Serious eye damage/irritation

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Respiratory or skin sensitization

**Assessment:** May cause an allergic skin reaction May cause allergy or asthma symptoms or breathing difficulties if inhaled

**Product data:** No data available.

**Substance data:**

Name	Result
Cobalt, Metal pieces	Results from the test show that 11 of 15 animals induced with CoCl <sub>2</sub> became sensitized to CoCl <sub>2</sub> , as shown by the challenge, per ECHA.

### Carcinogenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:**

Name	Species	Result
Cobalt, Metal pieces		Under the conditions of a 2-year inhalation study, there was clear evidence of carcinogenic activity of cobalt metal in male and female F344/NTac rats based on increased incidences of alveolar/bronchiolar adenoma and carcinoma in the lung. There was clear evidence of carcinogenic activity of cobalt metal in male and female B6C3F1/N mice based on increased incidences of alveolar/bronchiolar neoplasms of the lung (predominantly carcinoma), including multiple carcinoma, per ECHA key study from NTP.

### International Agency for Research on Cancer (IARC):

Name	Classification
Cobalt, Metal pieces	Group 2B

**National Toxicology Program (NTP):** None of the ingredients are listed.

### Germ cell mutagenicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Reproductive toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

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### Substance data:

Name	Result
Cobalt, Metal pieces	NOAEL (fertility): 30 mg/kg bw/day per ECHA key study.

### Specific target organ toxicity (single exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Specific target organ toxicity (repeated exposure)

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Aspiration toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

**Information on likely routes of exposure:** No data available.

**Symptoms related to the physical, chemical and toxicological characteristics:** No data available.

**Other information:** No data available.

## SECTION 12: Ecological information

### Acute (short-term) toxicity

**Assessment:** Based on available data, the classification criteria are not met.

**Product data:** No data available.

**Substance data:** No data available.

### Chronic (long-term) toxicity

**Product data:** No data available.

**Substance data:** No data available.

### Persistence and degradability

**Product data:** No data available.

**Substance data:** No data available.

### Bioaccumulative potential

**Product data:** No data available.

**Substance data:** No data available.

### Mobility in soil

**Product data:** No data available.

**Substance data:** No data available.

**Other adverse effects:** No data available.

## SECTION 13: Disposal considerations

### Disposal methods:

It is the responsibility of the waste generator to properly characterize all waste materials according to

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applicable regulatory entities

### SECTION 14: Transport information

#### Canadian Transportation of Dangerous Goods (TDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

#### International Maritime Dangerous Goods (IMDG)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

#### International Air Transport Association Dangerous Goods Regulations (IATA-DGR)

UN number	Not regulated
UN proper shipping name	Not regulated
UN transport hazard class(es)	None
Packing group	None
Environmental hazards	None
Special precautions for user	None

### SECTION 15: Regulatory information

#### Canada regulations

##### Domestic substances list (DSL):

7440-48-4	Cobalt, Metal pieces	Listed
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Non-domestic substances list (NDSL): Not determined.

### SECTION 16: Other information

Abbreviations and Acronyms: None

#### Disclaimer:

This product has been classified in accordance with the Canadian Hazardous Products Regulations and WHMIS 2015. The information provided in this SDS is correct, to the best of our knowledge, based on information available. The information given is designed only as a guidance for safe handling, use, storage,



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transportation and disposal 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, unless specified in the text. The responsibility to provide a safe workplace remains with the user.

**NFPA:** 2-0-0

**HMIS:** 2-0-0

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**End of Safety Data Sheet**