SAFETY DATA SHEET

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1 Product identifiers

Product name	Cobalt, Metal Powder
CAS number	7440-48-4
Synonyms	No information available.

1.2 Relevant identified uses of the substance or mixture and uses advised against

Identified uses	Laboratory chemicals

1.3 Details of the supplier of the safety data sheet

Company	Lab Alley, LLC 12501 Pauls Valley Road Austin, Texas 78737 U.S.A.
Telephone	512-668-9918
Fax	512-886-4008

1.4 Emergency telephone

Emergency Phone #	US & Canada: 1-800-535-5053	INFOTRAC
	International 1-352-323-3500	INFOTRAC

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Aquatic Acute Toxicity	Category 1
Aquatic Chronic Toxicity	Category 1
Respiratory sensistation	Category 1

2.2 GHS Label elements, including precautionary statements

Pictogram	
Signal Word	Danger
Hazard statements	May cause allergy or asthma symptoms or breathing difficulties if inhaled. Very toxic to aquatic life with long lasting effects.
Precautionary statements:	If medical advice is needed, have product container or label at hand. Keep out of reach of children. Read label before use. Do not eat, drink or smoke when using this product. Avoid release to the environment. Avoid breathing dust/fume/gas/mist/vapors/spray. In case of inadequate ventilation wear respiratory protection. Collect spillage. IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Dispose of contents and container to an approved waste disposal plant.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

D2B

SECTION 3: Composition/information on ingredients

3.1 Components

Chemical name	Common name and synonyms	CAS number	Concentration
Cobalt	-	7440-48-4	>98%

SECTION 4: First aid measures

4.1 Description of first-aid measures

General advice

If inhaled	Loosen clothing as necessary and position individual in a comfortable position. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Consult a physician.
In case of skin contact	Rinse/flush exposed skin gently using soap and water for 15-20 minutes. Seek medical advice if discomfort or irritation persists.
In case of eye contact	Protect unexposed eye. Rinse/flush exposed eye(s) gently using water for 15-20 minutes. Remove contact lens(es) if able to do so during rinsing. Seek medical attention if irritation persists or if concerned.

If swallowed Rinse mouth thoroughly. Do not induce vomiting. Have exposed individual drink sips of water. Seek medical attention if irritation, discomfort or vomiting persists. Never give anything by mouth to an unconscious person.

4.2 Most important symptoms and effects, both acute and delayed
Irritation. Nausea. Headache. Shortness of breath.

4.3 Indication of any immediate medical attention and special treatment needed
If seeking medical attention, provide SDS document to physician. Physician should treat symptomatically.

SECTION 5: Firefighting measures

5.1 Extinguishing media

Suitable extinguishing media Use appropriate fire suppression agents for adjacent combustible materials or sources of ignition. Use water, dry chemical, chemical foam, carbon dioxide, or alcohol-resistant foam.

Unsuitable extinguishing media None.

5.2 Specific hazards arising from the substance or mixture
Combustion products may include carbon oxides or other toxic vapors. Thermal decomposition can lead to release of irritating gases and vapors.

5.3 Special protective equipment and precautions for firefighters
Use NIOSH-approved respiratory protection/breathing apparatus. Move product containers away from fire or keep cool with water spray as a protective measure, where feasible. Use spark-proof tools and explosion-proof equipment. Avoid generating dust; fine dust dispersed in air in sufficient concentrations, and in the presence of an ignition source is a potential dust explosion hazard. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

5.4 Further information

Flash Point No data 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.

NFPA

Health	Flammability	Instability	Physical hazards
2	1	0	N/A

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Ensure that air-handling systems are operational. Ensure adequate ventilation.

6.2 Environmental precautions

Prevent from reaching drains, sewer or waterway. Collect contaminated soil for characterization per Section 13. Should not be released into environment.

6.3 Methods and materials for containment and cleaning up

Keep in suitable closed containers for disposal. Wear protective eyeware, gloves, and clothing. Refer to Section 8. Always obey local regulations. Evacuate personnel to safe areas.

6.4 Reference to other sections

See section 2 for full list of hazard and precaution statements.

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Precautions on safe handling

Minimize dust generation and accumulation. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Avoid release to the environment. Do not eat, drink, smoke, or use personal products when handling chemical substances. Avoid contact with eyes, skin, and clothing.

Hygiene measures

Perform routine housekeeping. Wash hands before breaks and at the end of work. Avoid contact with skin, eyes, and clothing. Before wearing wash contaminated clothing.

7.2 Conditions for safe storage, including any incompatibilities

Storage conditions

Store away from incompatible materials. Protect from freezing and physical damage. Keep away from food and beverages. Provide ventilation for containers. Store in cool, dry conditions in well sealed containers. Store with like hazards.

Incompatibilities

No information available.

SECTION 8: Exposure controls/personal protection

8.1 Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Cobalt	TWA	0.01 mg/m3

US. ACGIH Threshold Limit Values
No information available.

US. NIOSH: Pocket Guide to Chemical Hazards
No information available.

Biological occupational exposure limits
No information available.

8.2 Exposure controls

Appropriate engineering controls
Emergency eye wash fountains and safety showers should be available in the immediate vicinty of use/handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor or dusts (total/respirable) below the applicable workplace exposure limits (Occuptational Exposure Limits - OELs) indicated above. It is recommended that all dust control equipment such as local exhaust ventilation and material transport systems involved in handling of this product contain explosion relief vents or an explosion suppression system or an oxygen deficient environment. Ensure that dust-handling systems (such a exhaust ducts, dust collectors, vessels, and processing equipment) are designed in a manner to prevent the escape of dust into the work area (i.e., there is no leakage from the equipment). Use under a fume hood.

Personal protective equipment

Eye/face protection
Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

Skin and body protection
Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

Respiratory protection
Not required under normal conditions of use. Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. When necessary use NIOSH approved breathing equipment.

Control of environmental exposure

No information available.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical State	Hard, solid, magnetic ductile pieces
Appearance	Gray
Odor	Odorless
Odor Threshold	No information available
pH	No information available
Melting Point/Range	1495 °C
Boiling Point/Range	2870 °C
Evaporation Rate	No information available
Flammability (solid)	No information available
Flammability or explosive limit	
Upper	No data available
Lower	No data available
Vapor Pressure	No information available
Vapor Density	No information available
Density	8.9 g/cm3 @ 20 °C
Solubility	Insoluble
Partition coefficient; n-octanol/water	No information available
Autoignition Temp	No information available
Decomposition Temp	No information available
Viscosity	No information available
Molecular Formula	Co
Molecular Weight	58.9331
VOC Content(%)	No information available
Oxidizing properties	No information available

9.2 Other safety information

No information available.

SECTION 10: Stability and reactivity

10.1 Reactivity

Nonreactive under normal conditions.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

None under normal processing.

10.4 Conditions to avoid

Incompatible Materials.

10.5 Incompatible materials

Strong acids. Strong bases. Oxidizing agents.

10.6 Hazardous decomposition products

None.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

Product Information, Component Information

Acute toxicity

Component	LD50 Oral	LD50 Dermal	LC50 Inhalation
Cobalt	6170 mg/kg (rat)	-	-

Skin corrosion/irritation

No information available

Serious eye damage/eye irritation

No information available.

Respiratory or skin sensitization

No information available.

Germ cell mutagenicity

No information available.

Carcinogenicity

Component	CAS	IARC	NTP	ACGIH	OSHA	Mexico
Cobalt	7440-48-4	Not listed	Not listed	Not listed	Not listed	Not listed

Specific target organ toxicity - single exposure

No information available

Specific target organ toxicity - repeated exposure

No information available

Reproductive toxicity

No information available

Chronic effects

No information available

11.2 Additional Information

No information available

SECTION 12: Ecological information

12.1 Toxicity
No information available.

12.2 Persistence and degradability
No information available

12.3 Bio accumulative potential
Bioaccumulation Rudarious ercodes - 8 weeks - 990 µg/l Bioconcentration factor (BCF): 2.16

12.4 Mobility in soil
No information available

12.5 Results of PBT and vPvB assessment
No information available.

12.6 Endocrine disrupting properties
No information available

12.7 Other adverse effects
No information available.

SECTION 13: Disposal considerations

13.1 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.

SECTION 14: Transport information

DOT (US)

UN-No	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S.
Hazard Class	9
Packing Group	Marine pollutant.

IMDG

UN-No	UN3077
Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S.
Hazard Class	9
Packing Group	Marine pollutant.

IATA

UN-No	UN3077

Proper Shipping Name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE SOLID, N.O.S.
Hazard Class	9
Packing Group	Marine pollutant.

SECTION 15: Regulatory information

US federal regulations This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)
Listed

CERCLA Hazardous Substance List (40 CFR 302.4)
Listed, 5000 lb

SARA 304 Emergency release notification
Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)
Not regulated.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

SARA 302 Extremely hazardous substance
Not listed.

SARA 311/312 Hazardous
Listed, Acute, Chronic.

SARA 313 (TRI reporting)
Not listed.

Other federal regulations

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not listed.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not listed.

Safe Drinking Water Act
Not listed.

FEMA Priority Substances Respiratory Health and Safety in the Flavor Manufacturing Workplace
Not listed.

US state regulations

US. Massachusetts RTK - Substance List
Not listed.

US. New Jersey Worker and Community Right-to-Know Act
Not listed.

US. Pennsylvania Worker and Community Right-to-Know Law

Not listed.

California Proposition 65

Not listed.

SECTION 16: Other information

Issue date: 10/24/2014
Revision 1: 06/19/2015
Revision 2: 07/24/2024

SECTION 17: Disclaimer

The information provided on 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 guide for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered as 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 material or in any process, unless specified in the text.