STANFORD ADVANCED MATERIALS

http://www.samaterials.com

Stanford Advanced Materials
We not only sell products, we provide satisfactions.
72 Fairbanks Suite 100, Irvine, CA 92618, USA
Tel: (949) 407-8904 Fax: (949) 812-6690

Current Version: 2.0
Revision Date: Sep 5, 2012

# *Material Safety Data Sheet*

Identity: Cobalt  Formula: Co

## SECTION I - GENERAL INFORMATION

Manufacturer: Stanford Advanced Materials (SAM)

The information below is believed to be accurate and represents the best information available to SAM. However, SAM makes no warranty, expressed or implied with respect to such information and assumes no liability resulting from its use.

## SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Molecular weight: 58.93

| CAS # | OSHA PEL | ACGIH TLV | % |
|---|---|---|---|
| 7440-48-4 | 0.05mg/m3 | 0.02mg/m3 | >99% |

## SECTION III – PHYSICAL/CHEMICAL CHARACTERISTICS

Physical States: Solid

Boiling Point: 2900.0 ℃
Melting Point: 1493.0 ℃
Evaporation Rate: N/A
Solubility in water: Insoluble

Specific Gravity ($H_2O$=1): 8.9
Vapor Pressure (vs. air or mmHg): N/A
Vapor Density (vs. air=1): N/A
Percent Volatile: N/A

*Appearance and odor*: Grey to black powder and pieces, odorless

## SECTION IV - FIRE AND EXPLOSION HAZARD DATA:

*Flash Point*: N/A
*Method Used*: N/A  *Explosive Limits*: LEL: N/A  UEL: N/A

*Extinguishing Media:*
Water, $Co_2$, and powder. Use suitable extinguishing agent for surrounding material and type of fire

*Special Fire Fighting Procedures:*
Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

*Unusual Fire and Explosion Hazards:*
Cobalt dust may present a fire or explosion hazard under favoring conditions of particle size, dispersion and strong ignitions source

Stanford Advanced Materials
We not only sell products, we provide satisfactions.
72 Fairbanks Suite 100, Irvine, CA 92618, USA
Tel: (949) 407-8904 Fax: (949) 812-6690

## SECTION V - REACTIVITY DATA

*Stability*: Stable
*Conditions to Avoid (stability)*: Incompatible materials
*Incompatibility:* Acetylene, hydrazinium nitrate, ammonium nitrate, bromine pentafluoride; Contact with strong acids generates flammable hydrogen gas; Strong oxidizers may cause fire

*Hazardous Decomposition or Byproducts:* None known
*Hazardous Polymerization*: Will not occur
*Conditions to avoid (hazardous polymerization)*: None recorded

## SECTION VI - HEALTH HAZARD DATA

*Routes of entry*: Inhalation? Yes Skin? Yes
Eyes? No Ingestion?
Yes Other? No

*Health Hazards (Acute and Chronic):*

*Inhalation:*
Acute: May cause irritation of respiratory organs resulting in obstruction of airways and shortness of breath.
Chronic: Prolonged exposure may cause respiratory illness and interstitial fibrosis

*Ingestion:*
Acute: Potential for causing blood, heart, thyroid and pancreas damage
Chronic: No chronic hazards recorded

*Skin:*
Acute: May aggravated skin allergies
Chronic: No chronic hazards recorded

*Eye:*
Acute: Ma cause serious eye irritation, watering, redness and burning
Chronic: No chronic hazards recorded

*Target Organs*: Eyes, skin and respiratory tract

*Carcinogenicity*: NTP? No IARC? Yes OSHA Regulated? No

*Emergency and First Aid Procedures:*

*Inhalation:* Remove victim to fresh air, keep warm and quiet, and give oxygen if breathing is difficult; seek medical attention

*Ingestion:* Give 1 -2 glasses of milk or water and induce vomiting, seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

*Skin:* Remove contaminated clothing, brush material off skin, wash affected area with mild soap and water, and seek medical attention if symptoms persist.

*Eye:* Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes and seek medical attention immediately.

Stanford Advanced Materials
We not only sell products, we provide satisfactions.
72 Fairbanks Suite 100, Irvine, CA 92618, USA
Tel: (949) 407-8904 Fax: (949) 812-6690

## SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE

*Steps to be taken in case material is released or spilled:*

Wear appropriate respiratory and protective equipment specified in section VIII. Isolate spill area, provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

*Waste disposal method:*

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

*Hazard Label Information:*

Store in cool, dry area and in tightly sealed container. AVOID oxidizing and acidic materials. Wash thoroughly after handling.

## SECTION VIII - CONTROL MEASURES

*Protective Equipment Summary (Hazard Label Information*):

NIOSH approved respirator, impervious gloves, safety glasses, clothes to prevent contact.

*Ventilation:*

Local Exhaust: May be necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

Mechanical (General): Recommended.

*Work/Hygienic/Maintenance Practices*:

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Do not blow dust off clothing or skin with compressed air.

Please be advised that N/A can either mean Not Applicable or No Data Has Been Established