



OMG AMERICAS, INC.  
2301 SCRANTON ROAD  
CLEVELAND, OHIO 44113

MATERIAL SAFETY DATA SHEET

**1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION**

**PRODUCT NAME:** 21% COBALT SULFATE CRYSTALS

**PRODUCT CODE:** 00090

**MANUFACTURING LOCATION:**

OMG AMERICAS, INC.  
TWO MILE RUN ROAD  
VENANGO COUNTY, FRANKLIN, PA 16323

**DATE REVISED:** 05/13/2002

**DATE PRINTED:** 05/13/2002

**IN CASE OF EMERGENCY CONTACT:**

8:00 a.m. to 5:00 p.m. (EST): 440-899-2950  
After 5:00 p.m.(EST): 814-432-2125

**CHEMICAL FAMILY/USE:** Inorganic salt

**CHEMICAL FORMULA:** NA

**HMIS: HEALTH:** 1\*  
**FLAMMABILITY:** 0  
**REACTIVITY:** 0  
**PERSONAL PROTECTION:** E

\*Chronic health hazard

**2. COMPOSITION/INFORMATION ON INGREDIENTS**

Component/CAS	Percent	ACGIH TLV:	ACGIH Short Term Exposure Limit (STEL) value:	OSHA PEL:	OSHA Short Term Exposure Limit (STEL) value:	Units that the TWAs and STELs for ACGIH and OSHA are in:
Cobalt Sulfate 10124-43-3	55	0.02	NE	0.1+	NE	mg/m3
Water of Hydration 7732-18-5	45	NE	NE	NE	NE	

+For metal dust and fume, as Co

**3. HAZARDS IDENTIFICATION**

**EMERGENCY OVERVIEW:**

Exposure to cobalt compounds may cause sensitization by inhalation and skin contact. Dust from handling can cause irritation of nose and throat. Prolonged exposure could cause serious respiratory illness and lung damage. Sensitized persons may develop wheezing and shortness of breath. Can also cause an allergic skin rash in some individuals. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation. Avoid breathing dust. Avoid contact with skin and eyes.

**EYE CONTACT:**

May cause mild eye irritation.

**SKIN CONTACT:**

May cause allergic reactions. May cause sensitization by skin contact. Cobalt compounds have been shown to produce dermatitis and investigators have been able to demonstrate a hypersensitivity of the skin to cobalt.

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00090

**INGESTION:**

Ingestion of significant amounts of soluble cobalt salts has been reported to have the potential for causing blood, heart, thyroid and pancreas damage.

**INHALATION:**

Prolonged inhalation of cobalt dust, or metal dust, fume or mist containing cobalt may cause serious respiratory illness. There are references in the literature associating cobalt with interstitial fibrosis, a disease which can be fatal. Inhalation may cause an irritation of respiratory organs of sensitive persons resulting in obstruction of airways with shortness of breath.

**4. FIRST AID MEASURES**

**EYES:**

Rinse thoroughly with clear water. If irritation occurs, contact a physician.

**SKIN:**

Wash thoroughly with soap and plenty of clean water. If irritation occurs, contact a physician.

**INHALATION:**

In case of inhalation of dust, fume or mist, remove from exposure. If necessary give oxygen, contact a physician.

**INGESTION:**

In case of ingestion and if conscious, induce vomiting. Contact a physician.

**MEDICAL CONDITIONS AGGRAVATED:**

Allergic or hypersensitive persons should not be allowed on jobs involving exposure to cobalt dust. Allergic or hypersensitive persons may develop a skin reaction or obstructive lung disease. Asthma and lung diseases, skin disease.

**NOTE TO PHYSICIAN:**

None known.

**5. FIRE FIGHTING MEASURES**

**FLASH POINT (° F)** .....Not Applicable

**OSHA FLAMMABILITY CLASSIFICATION:**

Not Applicable.

**EXTINGUISHING MEDIA:**

Not applicable. Product does not burn.

**SPECIAL FIREFIGHTING PROCEDURES:**

None required; however, when fighting chemical fires, self-contained breathing apparatus and protective clothing is recommended.

**EXPLOSION LIMITS IN AIR - LOWER (%)** .....Unknown

**EXPLOSION LIMITS IN AIR - UPPER (%)** .....Unknown

**AUTOIGNITION TEMP (° F)** .....Unknown

**UNUSUAL FIRE AND EXPLOSION HAZARDS:**

High concentrations of dust may present a dust explosion hazard.

**6. ACCIDENTAL RELEASE MEASURES**

**ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

The spill should first be contained and the area should be cleaned by wet-sweeping or vacuum cleaning (HEPA filter). Minimize the creation of dust. Approved NIOSH respirator for dust should be worn.

**7. HANDLING AND STORAGE**

**HANDLING:**

Keep from freezing. Avoid contact with skin and eyes. Avoid breathing dust. Use only with adequate ventilation. Always use gloves and safety glasses when opening/emptying containers or processing this material. Do not eat or drink in work area. Wash in soap and water after exposure to any dust.

**STORAGE:**

This material should be stored in sealed containers to avoid dampness and dust. Partly used containers should be sealed. Otherwise, no special precautions are required.

**8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

**ENGINEERING CONTROLS:**

Proper ventilation should be installed in order to maintain cobalt dust concentration in the air below the occupational exposure limits.

**RESPIRATORY PROTECTION EQUIPMENT:**

Use NIOSH approved respiratory protection where airborne level exceeds appropriate occupational exposure limit.

**PROTECTIVE GLOVES:**

Gloves, rubber or impervious coating.

**EYE AND FACE PROTECTION:**

Wear safety glasses or face shield in operations that do scatter fine particles in the air.

**OTHER PROTECTIVE EQUIPMENT:**

To prevent repeated or prolonged skin contact, wear impervious clothing and boots.

**VENTILATION:**

Use local exhaust ventilation directed towards the source of dust and which is adequate to limit personal exposure to levels which do not exceed the PEL or TLV. If such equipment is not available use respirators as specified above.

**9. PHYSICAL AND CHEMICAL PROPERTIES**

Boiling Range/Point .....	Not Applicable
Vapor Pressure .....	Not Applicable
Vapor Density (AIR=1) .....	Not Applicable
Freezing Point .....	Not Applicable
Melting Point .....	96.8° C
Physical State .....	Crystals
Color .....	Red-Orange
% Volatile by Weight .....	45
% Volatile by Volume .....	Unknown
Evaporation Rate ( Butyl Acetate=1) .....	Not Applicable
Specific Gravity @ 25°C .....	1.2
Weight per gallon .....	10.0 lbs.

**10. STABILITY AND REACTIVITY**

**STABILITY:**

Stable.

**HAZARDOUS POLYMERIZATION:**

Will not occur.

**HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:**

Toxic fumes of Cobalt Oxide. Sulfur dioxide.

**INCOMPATIBILITY (MATERIALS TO AVOID):**

None known.

**CONDITIONS TO AVOID:**

None known.

**11. TOXICOLOGICAL INFORMATION**

**TOXICITY DATA:** IARC has stated that there is sufficient evidence for the carcinogenicity of Cobalt metal powder in experimental animals. On the basis of animal evidence from experiments not regarded as relevant to human exposure, IARC has classified Cobalt as 2B, possible carcinogen for humans. ACGIH has given Cobalt a rating of A3, animal carcinogen. They state that available epidemiologic studies do not confirm an increased risk of cancer in exposed humans.

The National Toxicology Program concluded there was clear evidence of carcinogenic activity of cobalt sulfate heptahydrate based on increased incidence of bronchiolar and aveolar tumors in female F344/N rats, in male and female B6C3F1 mice, and some evidence of carcinogenic activity based on increased incidence of bronchiolar and alveolar tumors in male F344/N rats. (NTP TR-471, 1998).

**ACUTE ORAL LD50:** No data at this time.

**ACUTE DERMAL LD50:** No data at this time.

**ACUTE INHALATION LC50:** No data at this time.

**12. ECOLOGICAL INFORMATION**

**ECOTOXICOLOGICAL INFORMATION:**

No data at this time

**CHEMICAL FATE INFORMATION:**

No data at this time.

**13. DISPOSAL CONSIDERATIONS****DISPOSAL METHOD:**

Disposal should be made in accordance with federal, state and local regulations. Cobalt spills can be swept up and, if uncontaminated, re-used. Cobalt can be recycled and consideration of this route should be given. This product is not regulated as a hazardous waste under RCRA but may be regulated in certain states. Dispose of in accordance with Federal, State and Local laws.

**14. TRANSPORT INFORMATION**

**DOT SHIPPING NAME:** Environmentally Hazardous Substance, Solid, NOS (Cobalt Sulfate)  
**DOT HAZARD CLASS:** 9  
**UN/NA NUMBER:** UN3077  
**DOT PACKING GROUP:** III

**AIR FREIGHT TRANSPORTATION:** Environmentally Hazardous Substance, Solid, NOS (Cobalt Sulfate), 9, UN3077, III

**OCEAN TRANSPORTATION:** Environmentally Hazardous Substance, Solid, NOS (Cobalt Sulfate), 9, UN3077, III

**15. REGULATORY INFORMATION****TSCA STATUS:**

All components of this product are on the US TSCA Inventory.

**TSCA 12(b) EXPORT NOTIFICATION:**

No components of this product are subject to TSCA 12(b) export notification requirements.

**CALIFORNIA PROPOSITION 65:**

This material may contain the following chemicals which are known to the State of California to cause cancer or birth defects and are subject to the requirements of California Proposition 65:

Cobalt Sulfate (10124-43-3) Cancer

**CLEAN AIR ACT S112 HAZARDOUS AIR POLLUTANTS:**

Cobalt Compounds.

**SARA 302 EXTREMELY HAZARDOUS SUBSTANCES LIST:**

This product does not contain greater than 1.0% of any chemical substance on the SARA Extremely Hazardous Substance List.

**SARA (311, 312) HAZARD CLASS:**

Chronic health hazard.

**SARA SECTION 313 TOXIC CHEMICALS:**

Cobalt Compounds 55%

**AUSTRALIAN INVENTORY CHEMICAL SUBSTANCES:**

All components are listed on the Australian Core Inventory of Chemical Substances (ACOIN).

**CANADIAN INVENTORY:**

All components are on the Domestic Substance List (DSL).

**EINECS REGULATIONS:**

All components are on the European Inventory of Existing Commercial Chemical Substances (EINECS).

**JAPAN:**

All components are listed on the Japanese Existing and New Chemical Substances (ENCS).

**KOREAN CHEMICAL INVENTORY:**

All components are on the Korean List of Existing Chemical Substances.

**PHILIPPINE INVENTORY:**

All components are listed on the Philippines Inventory of Chemicals and Chemical Substances (PICCS).

**CHINESE INVENTORY:**

All components are listed on the Chinese Inventory of Existing Chemical Substances.

## 16. OTHER INFORMATION

### **DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:**

The information in this document is believed to be correct as of the date issued. However, no warranty of merchantability, fitness for any particular purpose, or any other warranty is expressed or is to be implied regarding the accuracy or completeness of this information, the results to be obtained from the use of this information or the product, the safety of this product, or the hazards related to its use. This information and product are furnished on the condition that the person receiving them shall make his own determination as to the suitability of the product for his particular purpose and on the condition that he assume the risk of his use thereof.

## 17. LABEL INFORMATION

### **SIGNAL WORD:**

CAUTION

### **TARGET ORGANS:**

May cause sensitization by inhalation and skin contact. Prolonged inhalation of cobalt dust, or metal dust, fume or mist containing cobalt may cause serious respiratory illness. **CANCER HAZARD** (contains cobalt sulfate which) can cause cancer. Risk of cancer depends on duration and level of exposure.

### **EYES:**

Rinse thoroughly with clear water. If irritation occurs, contact a physician.

### **SKIN:**

Wash thoroughly with soap and plenty of clean water. If irritation occurs, contact a physician.

### **INHALATION:**

In case of inhalation of dust, fume or mist, remove from exposure. If necessary give oxygen, contact a physician.

### **INGESTION:**

In case of ingestion and if conscious, induce vomiting. Contact a physician.

### **HANDLING:**

Avoid contact with skin and eyes. Avoid breathing the dust. Use with adequate ventilation. Always use an approved respirator for dust, gloves and safety glasses when opening/emptying containers or processing this material. Do not eat or drink in work area. Wash in soap and water after exposure to any dust.

### **STORAGE:**

This material should be stored in sealed containers to avoid dampness and dust. Partly used containers should be sealed. Otherwise, no special precautions are required.

### **ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:**

The spill should first be contained and the area should be cleaned by wet-sweeping or vacuum cleaning (HEPA filter). Minimize the creation of dust. Approved NIOSH respirator for dust should be worn.

### **EXTINGUISHING MEDIA:**

Not applicable. Product does not burn.