



OMG AMERICAS, INC.
811 SHARON DRIVE
WESTLAKE, OHIO 44145

MATERIAL SAFETY DATA SHEET

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: COBALT OXIDE 71-72
PRODUCT CODE: 95

MANUFACTURING LOCATION:

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

DATE REVISED: 09/29/1998
DATE PRINTED: 10/16/1998

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 Oxide 1308-06-1	>99.9	0.02	NE	0.1+	NE	mg/m3
Nickel Oxide 1313-99-1	<.1	0.2**	NE	1	NE	mg/m3

+For metal dust and fume, as Co

**For Nickel, Insoluble compounds, as Ni

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

OMG Americas, Inc.

COBALT OXIDE 71-72 95

and shortness of breath. Can also cause an allergic skin rash in some individuals. Avoid breathing dust. Wash thoroughly after handling. Keep container closed. Use with adequate ventilation.

EYE CONTACT:

May cause 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.

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 cobalt 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:

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 a dust respirator, suitable for sub micron particles.

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	Unknown
Vapor Pressure	Not Applicable
Vapor Density (AIR=1)	Not Applicable
Freezing Point	Unknown
Melting Point	1800° C
Physical State	Powder
Color	Black
% Volatile by Weight	Not Applicable
% Volatile by Volume	Not Applicable
Evaporation Rate (Butyl Acetate=1)	Not Applicable
Specific Gravity @ 25°C	0.9
Weight per gallon	8.3 lbs.

10. STABILITY AND REACTIVITY

STABILITY:

Stable.

HAZARDOUS POLYMERIZATION:

Will not occur.

HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:

Toxic fumes of Cobalt Oxide.

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.

ACUTE ORAL LD50: No data at this time.

ACUTE DERMAL LD50: No data at this time.

OMG Americas, Inc.

COBALT OXIDE 71-72 95

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: Not Regulated

DOT HAZARD CLASS: None

UN/NA NUMBER: None

DOT PACKING GROUP: None

AIR FREIGHT TRANSPORTATION: Not Regulated

OCEAN TRANSPORTATION: Not Regulated.

15. REGULATORY INFORMATION

TSCA STATUS:

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

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:

Nickel And Certain Nickel Compounds Cancer

CLEAN AIR ACT S112 HAZARDOUS AIR POLLUTANTS:

Cobalt Compounds. Nickel 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 >99.9%

Nickel Compounds <.1%

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 MITI, Ministry of International Trade and Industry.

KOREAN CHEMICAL INVENTORY:

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

16. OTHER INFORMATION

OMG Americas, Inc.

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.

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 cobalt 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.

FORMAT CODE: franklin