COBALT CARBONATE

**METAL CARBOXYLATES of:**
- Bismuth
- Calcium
- Cerium
- Chromium
- Cobalt
- Copper
- Iron
- Lead
- Lithium
- Manganese
- Nickel
- Palladium
- Platinum
- Potassium
- Rare Earths
- Silver
- Tin
- Zinc
- Zirconium
- Others - made to order

**METAL SALTS**
- Cobalt
- Manganese

**M-GARD™**
- Solvent and water based
- wood preservatives
- Copper Naphthenate
- Zinc Naphthenate

<table>
<thead>
<tr>
<th>METAL CARBOXYLATES of:</th>
<th>PROPERTIES</th>
<th>TYPICAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cobalt</td>
<td>% Cobalt</td>
<td>45/47</td>
</tr>
<tr>
<td>Nickel</td>
<td>% Nickel</td>
<td>0.0500</td>
</tr>
<tr>
<td>Iron</td>
<td>% Iron</td>
<td>0.0010</td>
</tr>
<tr>
<td>Copper</td>
<td>% Copper</td>
<td>0.0005</td>
</tr>
<tr>
<td>Zinc</td>
<td>% Zinc</td>
<td>0.0010</td>
</tr>
<tr>
<td>Manganese</td>
<td>% Manganese</td>
<td>0.0200</td>
</tr>
<tr>
<td>Sodium</td>
<td>% Sodium</td>
<td>0.5000</td>
</tr>
<tr>
<td>Magnesium</td>
<td>% Magnesium</td>
<td>0.0200</td>
</tr>
<tr>
<td>Calcium</td>
<td>% Calcium</td>
<td>0.0200</td>
</tr>
<tr>
<td>Sodium</td>
<td>% Sodium</td>
<td>0.0020</td>
</tr>
<tr>
<td>Chlorine</td>
<td>% Chlorine</td>
<td>0.0500</td>
</tr>
</tbody>
</table>

Standard Packing
Pallet: 20kg box
Special Packing: 640kg

**M-GARD™**
- Solvent and water based
- wood preservatives
- Copper Naphthenate
- Zinc Naphthenate

**METAL SALTS**
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The facts stated and the recommendations and suggestions herein are based upon experiments and information believed to be reliable. No guarantee is made of their accuracy. However, and MOONEY CHEMICALS INC ASSUMES NO LIABILITY FOR PRODUCT FAILURE OTHER THAN TO SUPPLY REPLACEMENT MATERIAL FOR PRODUCTS SHOWN TO BE DEFECTIVE WHEN ORDERED TO REFUND THE PURCHASE PRICE.

**Call our Order Department (800) 321-9696**
In Ohio call (216) 781-8383
TWX: 810/421-8322 FAX: 216/781-5919

OM Group, Inc.
Outokumpu Chemicals • Mooney Chemicals, Inc. • Vasset S.A.
2301 Scranton Road
Cleveland, Ohio 44113-4395

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In Ohio call (216) 781-8383
TWX: 810/421-8322 FAX: 216/781-5919
SECTION I: IDENTIFICATION AND EMERGENCY INFORMATION

TRADE NAME: COBALT CARBONATE
PRODUCT DESCRIPTION: Pink Powder
AFTER HOURS TELEPHONE NO. 814-432-2125
BUSINESS HOURS TELEPHONE NO. 216-781-8383

SECTION II: COMPONENTS AND HAZARD INFORMATION

<table>
<thead>
<tr>
<th>COMPONENT</th>
<th>CAS NO.</th>
<th>% WT.</th>
<th>EXPOSURE GUIDELINES</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>OSHA PEL TWA</td>
</tr>
<tr>
<td>Cobalt Carbonate</td>
<td>513-79-1</td>
<td>&gt;99</td>
<td>0.05</td>
</tr>
<tr>
<td>Nickel Carbonate</td>
<td>3333-67-3</td>
<td>0.02</td>
<td>0.1</td>
</tr>
</tbody>
</table>

OSHA 29 CFR 1910.1000 Table Z-1-A (Final Rule) TWA list for Cobalt metal, dust and fume (as Co) and Nickel, soluble compounds

HAZARDOUS MATERIALS IDENTIFICATION SYSTEM (HMIS)

Health  Flammability  Reactivity  Protective Equipment
1*  0  0  E

*Nickel Carbonate is a suspected carcinogen. Cobalt and cobalt compounds are Group 2B carcinogens.

SECTION III: PRIMARY ROUTES OF ENTRY AND EMERGENCY AND FIRST AID PROCEDURES

EYE CONTACT: May cause eye irritation. Flush with large amounts of water, lifting upper and lower lids occasionally. Get medical attention.

SKIN: May cause skin irritation. Thoroughly wash exposed area with soap and water. Remove contaminated clothing. Launder contaminated clothing before re-use.

INHALATION: May be harmful if inhaled. May cause respiratory irritation. If affected, remove individual to fresh air. If breathing is difficult, administer oxygen. If breathing is stopped, give artificial respiration. Keep person warm, quiet. Get medical attention.

INGESTION: May be harmful if swallowed. Induce vomiting immediately by giving two glasses of water and sticking finger down throat. Call a physician. Never give anything by mouth to an unconscious person.
SECTION IV: FIRE AND EXPLOSION HAZARD INFORMATION

Flash Point (Minimum)°F: Not Applicable

Handling Precautions
Use product with caution around heat, sparks, pilot lights, static electricity, and open flame. Avoid generating dust.

EXTINGUISHING MEDIA AND FIRE FIGHTING PROCEDURES
Foam, water spray (fog) dry chemical, carbon dioxide

DECOMPOSITION PRODUCTS UNDER FIRE CONDITIONS
Toxic fumes and metal oxides may be present during decomposition.

"EMPTY" CONTAINER WARNING:

SECTION V: HEALTH AND HAZARD INFORMATION

EFFECTS OF OVEREXPOSURE (Signs and Symptoms of Exposure)
May cause eye, skin and upper respiratory tract irritation. Overexposure to cobalt compounds may cause respiratory sensitization and an allergic skin reaction. Cobalt compounds are mildly irritating to the eyes and if swallowed, may cause vomiting, diarrhea and a sensation of hotness. Excessive inhalation and/or ingestion of cobalt salts may affect the kidneys, lungs and thyroid. Nickel carbonate is a possible cancer hazard based on laboratory animal experiments.

NATURE OF HAZARD AND TOXICITY INFORMATION

Carcinogenicity: NTP: __ Yes XX No
IARC: XX Yes __ No
OSHA: __ Yes XX No

IARC has classified cobalt and cobalt compounds as Group 2B carcinogens. Group 2B carcinogens are possibly carcinogenic to humans. See IARC Monograph, Volume 52.
SECTION VI: PHYSICAL DATA

The following data are approximate or typical values and should not be used for precise design purposes.

Boiling Point: N/A

Vapor Pressure: N/A

Vapor Density (Air = 1)

Heavier than air

% Volatile by Weight: N/A

% Volatile by Volume: N/A

Evaporation Rate

N/A

Specific Gravity: 4.13

Odor: No odor

Color: Pink

SECTION VII: REACTIVITY

This product is stable and will not react violently with water. Hazardous polymerization will not occur. Avoid contact with strong oxidizing agents (e.g., hydrogen peroxide, bromine and chromic acid). Yields CO₂.

SECTION VIII: ENVIRONMENTAL INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED

Eliminate all sources of ignition (flares, flames, including pilot lights, electrical sparks). Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed. Stop spill at source. Ventilate area of spill. Collect material into appropriate containers for reuse or disposal. Material may also be flushed with water to a wastewater treatment system.

Dispose in closed containers in accordance with local, state and federal regulations.

SECTION IX: PROTECTION AND PRECAUTIONS

VENTILATION: Provide sufficient mechanical (general) and/or local exhaust ventilation to maintain exposure below TLVs.

RESPIRATORY PROTECTION: Use a NIOSH?MSHA approved respirator if exposure may, or does exceed occupational exposure limits.

PROTECTIVE GLOVES: Wear resistant gloves such as Neoprene.

EYE PROTECTION: Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other types of safety glasses.

OTHER PROTECTIVE EQUIPMENT: Use chemical-resistant apron or other impervious clothing, if needed, to avoid contaminating regular clothing which could result in prolonged or repeated skin contact.

WORK PRACTICES/ENGINEERING CONTROLS

Keep containers and storage containers closed when not in use. Do not store near heat, sparks, flame or open flames.

PERSONAL HYGIENE: Minimize breathing vapor, mist or fumes. Avoid prolonged or repeated contact with skin. Remove contaminated clothing; launder or dry clean before reuse. Remove contaminated shoes and thoroughly clean before reuse. Wash thoroughly after contact, before breaks and meals, and at the end of the day.
TRANSPORTATION INCIDENT INFORMATION

For further information relative to spills resulting from transportation incidents, refer to the latest Department of Transportation Emergency Response Guidebook, DOT P 5800.5. Guide #25

DOT IDENTIFICATION NUMBER

Classifications:  DOT Shipping Name: Chemicals, NOS
                 DOT Hazard Class: Not Regulated
                 UN or NA Number: 

Material with a flash point of 100°F - 200°F are subject to the Hazardous Material Regulations only in 110 gallon containers or larger - 49 CFR 173.118 (a)

INTERNATIONAL TRANSPORTATION:

Hazardous Material: __Yes   XXNo
For further information, refer to the latest IMCO Regulations.

AIR FREIGHT TRANSPORTATION:

Hazardous Material: __Yes   XXNo
For further information, refer to the latest ICAO Regulations or IATA Regulations.

SECTION XI: SPECIAL COMMENTS

TSCA: All components are listed on TSCA Inventory: XXYes   No

SARA:

Section 302 Extremely Hazardous Substance List  40 CFR 355     Yes XXNo
Section 313 Toxic Chemical List                  40 CFR 372.65   XXYes   No

<table>
<thead>
<tr>
<th>CAS No.</th>
<th>Chemical Name</th>
<th>% by Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not Applicable</td>
<td>Cobalt Compounds</td>
<td>&gt;99</td>
</tr>
<tr>
<td>Not Applicable</td>
<td>Nickel Compounds</td>
<td>0.02</td>
</tr>
</tbody>
</table>

CERCLA: Hazardous Substance List  40 CFR 302.4  Yes XXNo

RQ Lbs.: ________

The information and recommendations contained herein are, to the best of Mooney's knowledge and belief, accurate and reliable as of the date issued. Mooney does not warrant or guarantee their accuracy or reliability, and Mooney ASSUMES NO LIABILITY. No warranties of merchantability, fitness or otherwise are created. MOONEY SHALL NOT BE LIABLE FOR SPECIAL INCIDENTAL AND CONSEQUENTIAL DAMAGES.