1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: 6% COBALT HEX-CEM
PRODUCT CODE: 00071

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

DATE REVISED: 04/25/2002
DATE PRINTED: 04/25/2002

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: Metal Carboxylate
CHEMICAL FORMULA: NA

HMIS:
HEALTH: 1*
FLAMMABILITY: 2
REACTIVITY: 0
PERSONAL PROTECTION: B

*Chronic health hazard

2. COMPOSITION/INFORMATION ON INGREDIENTS

<table>
<thead>
<tr>
<th>Component/CAS</th>
<th>Percent</th>
<th>ACGIH TLV:</th>
<th>ACGIH Short Term Exposure Limit (STEL) value:</th>
<th>OSHA PEL:</th>
<th>OSHA Short Term Exposure Limit (STEL) value:</th>
<th>Units that the TWAs and STELs for ACGIH and OSHA are in:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral Spirits</td>
<td>70</td>
<td>100</td>
<td>NE</td>
<td>500*</td>
<td>NE</td>
<td>ppm</td>
</tr>
<tr>
<td>8052-41-3</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cobalt 2-Ethylhexanoate</td>
<td>30</td>
<td>NE</td>
<td>NE</td>
<td>0.1+</td>
<td>NE</td>
<td>mg/m3</td>
</tr>
<tr>
<td>136-52-7</td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

+For metal dust and fume, as Co
*The Manufacturer Recommended Exposure Limit for Mineral Spirits (8052-41-3) is 100 PPM.

JAPANESE ENCS NUMBER(S):
Cobalt 2-Ethylhexanoate: (2)-615
Mineral Spirits: (9)-1702

JAPANESE INDUSTRIAL SAFETY HYGIENE AND LABOR (ISHL):
Cobalt 2-Ethylhexanoate is regulated under ISHL, number 173, as Cobalt Compounds. Minerals Spirits is regulated under ISHL, as a Dangerous Substance, Flammable, under Table 1-4.

3. HAZARDS IDENTIFICATION

EMERGENCY OVERVIEW:

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Exposure to cobalt compounds may cause sensitization by inhalation and skin contact. Combustible liquid. Keep away from heat and all sources of ignition. May cause mild eye irritation. Aspiration hazard if swallowed. Can enter lungs and cause damage. Keep container tightly closed. Use adequate ventilation. Avoid contact with eyes, skin and clothing. Do not taste or swallow. Wash hands thoroughly after handling.

**EYE CONTACT:**
Exposure to liquid may cause mild eye irritation. Symptoms may include stinging, tearing, and redness. Does not damage eye tissue.

**SKIN CONTACT:**
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. May cause skin defatting with prolonged exposure. Exposure may cause skin irritation. Prolonged or repeated exposure may dry the skin. Symptoms may include redness, burning, drying and cracking, and skin damage. Pre-existing skin disorders may be aggravated by exposure to this material.

**INGESTION:**
Swallowing small amounts during handling is not likely to cause harmful effects; swallowing large amounts may be harmful. Symptoms may include gastrointestinal irritation (nausea, vomiting, diarrhea), central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness). This material can enter the lungs during swallowing or vomiting and cause lung inflammation and/or damage. Small amounts of this product aspirated into the respiratory system during ingestion or vomiting may cause mild to severe pulmonary injury, possibly progressing to death.

**INHALATION:**
May cause sensitization by inhalation. Prolonged inhalation of cobalt dust, or metal dust, fume or mist containing cobalt may cause respiratory illness. Causes mild respiratory irritation. Symptoms are more typically seen at air concentrations exceeding the recommended exposure limits. Symptoms of exposure may include irritation (nose, throat, respiratory tract) and central nervous system depression (dizziness, drowsiness, weakness, fatigue, nausea, headache, unconsciousness, possible death. Reports have associated repeated and prolonged overexposure to solvents with permanent brain and nervous system damage (sometimes referred to as Solvent or Painter's syndrome). Intentional misuse by deliberately concentrating and inhaling this material may be harmful or fatal.

### 4. FIRST AID MEASURES

**EYES:**
If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water, holding eyelids apart. If symptoms persist, seek medical attention.

**SKIN:**
Remove contaminated shoes and clothing, and flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area thoroughly by washing with mild soap and water. If irritation or redness develops, seek medical attention. Launder clothing before reuse.

**INHALATION:**
If respiratory symptoms develop, move victim away from source of exposure and into fresh air. If symptoms persist, seek medical attention. If victim is not breathing, immediately begin artificial respiration. If breathing difficulties develop, oxygen should be administered by qualified personnel. Seek immediate medical attention.

**INGESTION:**
Aspiration hazard. Do not induce vomiting or give anything by mouth because this material can enter the lungs and cause severe lung damage. If the victim is drowsy or unconscious, place on left side with head down. If possible, do not leave victim unattended. Seek immediate medical attention.

**MEDICAL CONDITIONS AGGRAVATED:**
Conditions aggravated by exposure may include skin disorders and respiratory (asthma-like) disorders.

**NOTE TO PHYSICIAN:**
None known.

### 5. FIRE FIGHTING MEASURES

**FLASH POINT (° F)** ..........................................................>100, PMCC

**OSHA FLAMMABILITY CLASSIFICATION:**
Combustible Liquid-Class II

**EXTINGUISHING MEDIA:**
Dry chemical, carbon dioxide, Halon, or foam. Water spray is recommended to cool or protect exposed materials or structures. Water may be ineffective for extinguishment, unless used under favorable conditions by experienced fire fighters. Halon may decompose into toxic materials. Carbon dioxide can displace oxygen. Use caution when applying Halon or carbon dioxide in confined spaces. Avoid spraying water directly into storage containers due to danger of boilover. Product will float on the surface of water and may be reignited.

OMG Americas, Inc.
SPECIAL FIREFIGHTING PROCEDURES:
During fire, a water spray can scatter flames and should be used by experienced firefighters. Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure demand mode when fighting fires. In addition, wear appropriate protective equipment as conditions warrant. Isolate damage area, keep unauthorized personnel out. Stop spill/release if it can be done with minimal risk. Move undamaged containers from danger area if it can be done with minimal risk. Water spray may be useful in minimizing or dispersing vapors. Cool equipment exposed to fire with water, if it can be done with minimal risk. Avoid spreading burning liquid with water used for cooling purposes.

EXPLOSION LIMITS IN AIR - LOWER (%): 0.7 for mineral spirits
EXPLOSION LIMITS IN AIR - UPPER (%): 8.9 for mineral spirits
AUTOIGNITION TEMP (° F): 445 for mineral spirits

UNUSUAL FIRE AND EXPLOSION HAZARDS:
None.

6. ACCIDENTAL RELEASE MEASURES

ACTION TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:
Eliminate all ignition sources. Spilled material may be absorbed into an appropriate absorbent material. Prevent spilled material from entering sewers, storm drains, other authorized treatment drainage systems, and natural waterways. Stop spill/release if it can be done with minimal risk. Stay upwind and away from spill/release. Isolate danger and keep unauthorized personnel out. Use non-sparking tools and explosion-proof equipment. Recover by pumping (use an explosion-proof or hand pump) or with a suitable absorbent. Consult an expert on disposal of recovered material and ensure conformity to local disposal regulations.

7. HANDLING AND STORAGE

HANDLING:
Cobalt carboxylates may cause the ignition of rags or paper goods or other oxidizable materials. Keep container closed. Handle and open containers with care. Open container slowly to relieve any pressure. Bond and ground all equipment when transferring from one vessel to another. The use of explosion-proof equipment is recommended and may be required. Do not enter confined spaces such as tanks or pits without following proper entry procedures such as ASTM D-4276 and 29CFR 1910.146. Material will accumulate static charges which may cause an electrical spark (ignition source). Use proper grounding procedures. Do NOT pressurize, cut, heat, or weld containers. Empty product containers may contain product residue. Do NOT reuse empty containers without commercial cleaning or reconditioning. "Empty" drums should be completely drained and properly bunged. All other containers should be disposed of in an environmentally safe manner and in accordance with government regulations. Do not transfer to any unlabeled container. Wash exposed skin thoroughly after handling. Do not wear contaminated clothing or shoes. Use good personal hygiene practice. For industrial use only.

Warning: Sudden release of hot organic chemical vapors or mists from process equipment operating at elevated temperatures and pressures, or sudden ingress of air into vacuum equipment, may result in ignitions without the presence of obvious ignition sources. Published “autoignition” temperature values cannot be treated as safe operating temperatures in chemical processes without analysis of the actual process conditions. Any use of this product in elevated temperature processes should be thoroughly evaluated to establish and maintain safe operating conditions.

STORAGE:
Keep container(s) tightly closed. Use and store this material in a cool, dry, well-ventilated area away from heat, direct sunlight, hot metal surfaces, and all sources of ignition. Post "NO SMOKING OR OPEN FLAME." Store only in approved containers. Keep away from any incompatible material. Protect container(s) against physical damage. Outdoor or detached storage is preferred. Indoor storage should meet OSHA standards and appropriate fire codes.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING CONTROLS:
If current ventilation practices are not adequate to maintain airborne concentrations below the established exposure limits, additional ventilation or exhaust systems may be required. Where explosive mixtures may be present, electrical systems safe for such locations must be used.

RESPIRATORY PROTECTION EQUIPMENT:
When exposures are not adequately controlled, use respirator approved for protection from organic vapors. If workplace exposure limit(s) of product or any component is exceeded, a NIOSH approved air supplied respirator is advised in absence of proper environmental control. OSHA regulations also permit other NIOSH respirators (negative pressure type) under specified conditions (See your industrial hygienist). Engineering or administrative controls should be implemented to reduce exposure.

PROTECTIVE GLOVES:
Appropriate disposable gloves are acceptable. Resistant gloves such as Nitrile rubber can be worn. Consult your safety equipment supplier.

**EYE AND FACE PROTECTION:**
Wear safety glasses or goggles to protect against exposure. Chemical splash goggles in compliance with OSHA regulations are advised; however, OSHA regulations also permit other types of safety glasses. Consult your safety representative.

**OTHER PROTECTIVE EQUIPMENT:**
Eye wash and quick-drench shower facilities. Impervious clothing and boots are recommended. Thoroughly clean shoes and wash contaminated clothing before reuse.

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

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**9. PHYSICAL AND CHEMICAL PROPERTIES**

- **Boiling Range/Point**: 313-390°F
- **Vapor Pressure**: 2 mm Hg @ 68°F for mineral spirits
- **Vapor Density (AIR=1)**: Heavier than air
- **Freezing Point**: Unknown
- **Melting Point**: Unknown
- **Physical State**: Liquid
- **Color**: Purple
- **% Volatile by Weight**: 70
- **% Volatile by Volume**: 81
- **Evaporation Rate (Butyl Acetate=1)**: Slower than ether
- **Specific Gravity @ 25°C**: 0.87
- **Weight per gallon**: 7.2 lbs.

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**10. STABILITY AND REACTIVITY**

**STABILITY:**
Stable.

**HAZARDOUS POLYMERIZATION:**
Will not occur.

**HAZARDOUS THERMAL DECOMPOSITION/COMBUSTION PRODUCTS:**

**INCOMPATIBILITY (MATERIALS TO AVOID):**
Contact with oxidizing agents. Reducing agents.

**CONDITIONS TO AVOID:**
Avoid heat and any source of ignition.

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

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**12. ECOLOGICAL INFORMATION**

**ECOTOXICOLOGICAL INFORMATION:**
No data at this time

**CHEMICAL FATE INFORMATION:**
No data at this time.

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13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:
As local regulations may vary, all waste must be disposed/recycled/reclaimed in accordance with federal, state, and local environmental control regulations.

This product is a RCRA hazardous waste if discarded in the produced form due to ignitibility. Empty containers must be handled with care due to material residue. Empty containers should be completely drained, properly bunged and shipped to a drum reconditioner.

14. TRANSPORT INFORMATION

DOT SHIPPING NAME: Paint Related Materials
DOT HAZARD CLASS: 3
UN/NA NUMBER: UN1263
DOT PACKING GROUP: III

EXCEPTION: 49 CFR 173.150: This material may be reclassified as a combustible liquid. It can be shipped as a non-hazardous material if the container is under 120 gallons.

AIR FREIGHT TRANSPORTATION: Paint Related Materials, 3, UN1263, III
OCEAN TRANSPORTATION: Flammable Liquid, NOS (contains Petroleum Distillates), 3, UN1993, III

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:
Toluene (108-88-3) Birth Defect
Benzene (71-43-2) Cancer

CLEAN AIR ACT S112 HAZARDOUS AIR POLLUTANTS:

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:
Acute health hazard. Chronic health hazard. Fire hazard.

SARA SECTION 313 TOXIC CHEMICALS:
Cobalt Compounds 30%

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).

JAPANESE POLLUTANT RELEASE TRANSFER REGISTER (PRTR):
Cobalt 2-Ethylhexanoate is a Class 1 regulated substance, number 100, as Cobalt Compounds. The annual threshold quantity is 1.0 tons.

16. OTHER INFORMATION

DISCLAIMER OF EXPRESSED AND IMPLIED WARRANTIES:
OMG Americas, Inc.
17. LABEL INFORMATION

SIGNAL WORD: CAUTION

TARGET ORGANS:
Prolonged inhalation of cobalt dust, or metal dust, fume or mist containing cobalt may cause serious respiratory illness. May cause sensitization by skin contact and inhalation. May cause eye, skin, or respiratory irritation.

EYES:
If irritation or redness develops, move victim away from exposure and into fresh air. Flush eyes with clean water, holding eyelids apart. If symptoms persist, seek medical attention.

SKIN:
Remove contaminated shoes and clothing, and flush affected area with large amounts of water. If skin surface is damaged, apply a clean dressing and seek medical attention. If skin surface is not damaged, cleanse affected area thoroughly by washing with mild soap and water. If irritation or redness develops, seek medical attention. Launder clothing before reuse.

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