

# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### Product Identification

Product Name: Crown & Bridge Alloy (unstamped)  
Product Number: 0106  
Chemical Family: Metals  
CAS Number: Blend

### Company Identification

CMP Industries LLC  
413 North Pearl St  
Albany, NY 12207-1311 USA  
(518)-434-3147 (For product information)  
(800)-424-9300 (For emergencies)  
1-800-424-9300 or 1-202-483-7616 (CHEMTREC)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>
CHROMIUM	14.0 %	7440-47-3
NICKEL	76.5 %	7440-02-0
MOLYBDENUM	4.5 %	7439-98-7
ALUMINUM	2.5 %	7429-90-5
BERYLLIUM	1.6 %	7440-41-7
COBALT	< 1.0 %	7440-48-4

(See Section 8 for exposure guidelines)

(See Section 15 for regulatory information)

### **HAZARDS DISCLOSURE**

This product contains hazardous materials as defined by the OSHA Hazard Communication Standard 29 CFR 1910.1200.

As defined under Sara 311 and 312, this product contains materials that are acute, chronic hazards.



### 3. HAZARDS IDENTIFICATION

```
***** EMERGENCY OVERVIEW *****
*
*                               WARNING
*
* Cancer hazard. Prolonged exposure can cause
* Pulmonary disease and Dermatitis.
*
*****
```

NFPA Rating - Health:  
Flammability:  
Reactivity:  
Special Hazard: N/A

#### POTENTIAL HEALTH EFFECTS

**EYE:**

Causes eye irritation.

**SKIN:**

Can cause moderate skin irritation. Allergic reactions are possible.

**INHALATION:**

Dust may be slightly irritating to respiratory tract.

**INGESTION:**

Ingestion is not considered a potential route of exposure.

**CHRONIC EFFECTS:**

Pulmonary Disease may result due to long term exposure.

**REPRODUCTIVE HAZARDS:**

None.

**CARCINOGENICITY INFORMATION:**

Cancer hazard (contains material which) can cause cancer. Nickel, chromium and beryllium are listed by IARC as carcinogens. Nickel, chromium, beryllium and colbalt are listed by NTP as carcinogens.

**MEDICAL CONDITIONS AGRAVATED BY EXPOSURE:**

Nickel sensitive persons may experience dermatitis.



#### 4. FIRST AID MEASURES

**EYE CONTACT FIRST AID:**

Flush eye with water.

**SKIN CONTACT FIRST AID:**

Immediately wash skin with soap and plenty of water.

**INHALATION FIRST AID:**

Remove to fresh air. If not breathing, give artificial respiration. Seek immediate medical attention.

**INGESTION FIRST AID:**

Induce vomiting. Contact a physician.

#### 5. FIRE FIGHTING MEASURES

**FLAMMABLE PROPERTIES**

COC Flash Point: N/A

Autoignition Temperature: N/A

**FLAMMABLE LIMITS IN AIR**

LEL: N/A

UEL: N/A

**FIRE & EXPLOSION HAZARDS:**

No known unusual hazards in a fire/explosion situation.

**FIRE FIGHTING INSTRUCTIONS:**

As in any fire, wear self-contained breathing apparatus pressure-demand MSHA/NIOSH (approved or equivalent) and full protective gear.

**MISCELLANEOUS:**

Elemental metals and metal oxides may be generated from melting in fire.

#### 6. ACCIDENTAL RELEASE MEASURES

**LARGE SPILLS PROCEDURE:**

In solid form this material poses no special clean up problems. Remove dust by vacuuming or wet sweeping. Protective clothing not normally required.

**SMALL SPILLS PROCEDURE:**

Same as large spill.



## 7. HANDLING AND STORAGE

### HANDLING (PERSONNEL):

Use suggested protective equipment in the following section.

### STORAGE PRECAUTIONS:

Segregate from mineral acids and oxidizing agents.

## 8. EXPOSURE CONTROLS / PERSONAL PROTECTION

### ENGINEERING CONTROLS:

If user operations generate dust, fume, or mist, use ventilation to keep exposure to airborne contaminants below the exposure limit.

### EYE / FACE PROTECTION REQUIREMENTS:

Chemical goggles or safety glasses are recommended to avoid contact with eyes.

### SKIN PROTECTION REQUIREMENTS:

Wear leather work gloves.

### RESPIRATORY PROTECTION REQUIREMENTS:

NIOSH approved respirators.

### MISCELLANEOUS:

Grinding equipment should be provided with adequate exhaust system.

### EXPOSURE GUIDELINES:

#### CHROMIUM

OSHA PEL: 1 mg/m<sup>3</sup>  
OSHA TWA: .05 mg/m<sup>3</sup>

#### NICKEL

OSHA PEL: 1 mg/m<sup>3</sup>  
OSHA TWA: 1 mg/m<sup>3</sup>

#### MOLYBDENUM

OSHA PEL: 15 mg/m<sup>3</sup>  
OSHA TWA: 5 mg/m<sup>3</sup>

#### ALUMINUM

OSHA PEL: 5 mg/m<sup>3</sup>  
OSHA TWA: 5 mg/m<sup>3</sup>

#### BERYLLIUM

OSHA PEL: .002 mg/m<sup>3</sup>  
OSHA TWA: .002 mg/m<sup>3</sup>

#### COBALT

OSHA PEL: .1 mg/m<sup>3</sup>  
OSHA TWA: .05 mg/m<sup>3</sup>



## 9. PHYSICAL AND CHEMICAL PROPERTIES

FORM .....: Solid (cylindrical)  
COLOR .....: Metallic Grey  
ODOR .....: No odor  
SOLUBILITY IN WATER ...: Negligible  
SPECIFIC GRAVITY .....: 8.0 (Water = 1)

## 10. STABILITY AND REACTIVITY

### STABILITY:

Stable.

### POLYMERIZATION:

Product will not undergo polymerization.

### INCOMPATIBILITY WITH OTHER MATERIALS:

Avoid contact with mineral acids and oxidizing agents.

### DECOMPOSITION:

Various metals and metal oxides may be generated from melting.

## 11. TOXICOLOGICAL INFORMATION

### CHRONIC EFFECTS /:

May cause respiratory disease.

### CHROMIUM

Test Code: Implant TDLO  
Species: Rat  
Results: 1200 micrograms/kg of body weight administered  
intermittently over a six week period.

### NICKEL

Test Code: Intravenous LDLO  
Species: Dog  
Results: 10 mg/kg

Test Code: LDlo  
Species: Guinea Pig  
Results: 5 mg/kg

### MOLYBDENUM

Test Code: Intraperitoneal LD50  
Species: Rat  
Results: 114 mg/kg



(section 11 continued)

**BERYLLIUM**

Test Code: TCLO  
Description: Inhalation  
Species: Human  
Results: 300 mg/m<sup>3</sup> produced pulmonary effects.

Test Code: Implant TDLO  
Species: Rat  
Results: 250 mg/kg

**COBALT**

Test Code: Oral LD50  
Species: Rat  
Results: 1500 mg/kg

Test Code: TDLO  
Description: Intravenous  
Species: Rabbit  
Results: 20 mg/kg produced neoplastic effects.

**12. ECOLOGICAL INFORMATION**

No information available.

**13. DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL:**

Dispose of waste material in accordance with all local, state/provincial, and national requirements.

**14. TRANSPORTATION INFORMATION**

PRODUCT LABEL .....: Crown & Bridge Alloy (unstamped)  
D.O.T. SHIPPING NAME .....: N/A  
TECHNICAL SHIPPING NAME ...: N/A  
D.O.T. HAZARD CLASS .....: N/A  
UN NUMBER .....: N/A



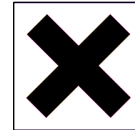
## 15. REGULATORY INFORMATION

### REGULATORY LISTS SEARCHED:

01 = SARA 313	02 = CA Proposition 65
03 = SARA 302/304	04 = CERCLA 302.4
05 = ACGIH TWA	06 = ACGIH STEL
07 = ACGIH CALC TLV	08 = OSHA PEL
09 = CANADIAN WHMIS	10 = OSHA Ceiling

### EEC Symbols and Indications of Danger:

Toxic (T), Irritant (Xi)



### R-Phrases:

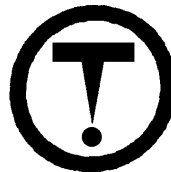
R36/37/38 - Irritating to eyes, respiratory system, and skin.  
R43 - May cause sensitization by skin contact.  
R49 - May cause cancer by inhalation.

### S-Phrases:

None

### WHMIS Hazard Symbols:

Class D2 - Materials Causing Other Toxic Effects



### Canadian Disclosure List

CHROMIUM (7440-47-3)  
NICKEL (7440-02-0)  
MOLYBDENUM (7439-98-7)  
ALUMINUM (7429-90-5)  
BERYLLIUM (7440-41-7)  
COBALT (7440-48-4)

### SARA Title III - Section 313

CHROMIUM (7440-47-3)  
NICKEL (7440-02-0)  
ALUMINUM (7429-90-5)  
BERYLLIUM (7440-41-7)  
COBALT (7440-48-4)



(section 15 continued)

**CERCLA Hazardous Substances**

CHROMIUM (7440-47-3) -- RQ 5000 lb  
NICKEL (7440-02-0) -- RQ 100 lb  
BERYLLIUM (7440-41-7) -- RQ 10 lb

**RCRA Hazardous Substances**

CHROMIUM (7440-47-3) -- RCRA Code: D007  
NICKEL (7440-02-0) -- RCRA Code: Unknown  
BERYLLIUM (7440-41-7) -- RCRA Code: P015

**Title V**

CHROMIUM (7440-47-3)  
NICKEL (7440-02-0)  
ALUMINUM (7429-90-5)  
BERYLLIUM (7440-41-7)  
COBALT (7440-48-4)

**CA Proposition 65**

NICKEL (7440-02-0)  
COBALT (7440-48-4)

**SC Toxic Air Pollutants List**

CHROMIUM (7440-47-3)  
NICKEL (7440-02-0)  
MOLYBDENUM (7439-98-7)  
ALUMINUM (7429-90-5)  
BERYLLIUM (7440-41-7)

**16. OTHER INFORMATION**

PREPARED BY .....: Regina Lane  
APPROVED BY .....: Abdul Khan  
TITLE .....: Q. C. Manager  
APPROVAL DATE .....: October 22, 2003  
SUPERCEDES DATE ...: September 29, 2003  
RTN NUMBER .....: 00000323 (Official Copy)

**ABBREVIATIONS USED IN THIS MSDS:**

TLV - THRESHOLD LIMIT VALUE	TWA - Time Weighted Average
STEL - SHORT TERM EXPOSURE LIMIT	TPQ - Threshold Planning Quantity
RQ - REPORTABLE QUANTITY	PEL - Permissible Exposure Limit
C - CEILING LIMIT	CAS - Chemical Abstract Service Number
NDA - NO DATA AVAILABLE	N/A - Not Applicable or Not Available





\*\*\*\*\*  
This information is furnished without warranty, expressed or implied,  
except that it is accurate to the best knowledge of CMP Industries Inc.  
The data on this sheet are related only to the specific material  
designated herein. CMP Industries Inc assumes no legal responsibility  
for use or reliance upon these data.

\*\*\*\*\*  
**END OF MSDS**  
\*\*\*\*\*

**UNCONTROLLED DOCUMENT**

