

# MATERIAL SAFETY DATA SHEET

## 1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

### Product Identification

Product Name: Beta Plus Alloy  
Product Number: 801050K  
Synonyms: Chrome Cobalt Alloy  
Chemical Name: Chrome Cobalt Alloy  
Chemical Family: Metal Alloy  
CAS Number: Blend

### Company Identification

Ticonium Co., Div. of CMP Industries LLC  
413 North Pearl Street  
Albany, NY 12207 USA  
(518)-434-3147 (For product information)  
(800)-833-2343 (For emergencies)  
1-800-424-9300 or 1-703-527-3887 (CHEMTREC)

## 2. COMPOSITION/INFORMATION ON INGREDIENTS

<u>Chemical Name</u>	<u>Amount</u>	<u>CAS Number</u>
COBALT	40.0 - 70.0 %	7440-48-4
CHROMIUM	10.0 - 40.0 %	7440-47-3
MOLYBDENUM	1.0 - 10.0 %	7439-98-7
SILICON	0.0 - 5.0 %	7440-21-3

(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.
*
*****
```

#### POTENTIAL HEALTH EFFECTS

**EYE:**

Causes eye irritation.

**SKIN:**

May cause skin irritation.

**INHALATION:**

Dust may be slightly irritating to respiratory tract.

**INGESTION:**

Ingestion is not considered a potential route of exposure.

**CHRONIC EFFECTS:**

Persons with with impaired pulmonary function should not be subjected to excessive airborne concentrations.

**REPRODUCTIVE HAZARDS:**

None.

**CARCINOGENICITY INFORMATION:**

Chromium and Cobalt are listed by IARC and/or NTP as carcinogens.

**MEDICAL CONDITIONS AGRAVATED BY EXPOSURE:**

Individuals with impaired pulmonary function should not be subjected to excessive airborne concentrations.

### 4. FIRST AID MEASURES

**EYE CONTACT FIRST AID:**

Immediately flush eyes with plenty of water.

**INHALATION FIRST AID:**

Remove to fresh air. If breathing is difficult, remove to fresh air and provide oxygen. Seek medical attention.



(section 4 continued)

**INGESTION FIRST AID:**

Swallow large amounts of water and induce vomiting. Obtain medical help.

**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

**FLAMMABLE PROPERTIES:**

Not Flammable.

**EXTINGUISHING MEDIA:**

Use extinguishing media appropriate for surrounding fire.

**FIRE & EXPLOSION HAZARDS:**

None.

**COMBUSTION PRODUCTS:**

None.

**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 to avoid air contamination. Protective clothing not normally required during clean up procedures.

**SMALL SPILLS PROCEDURE:**

Same as large spill.

**7. HANDLING AND STORAGE**

No information available.



## 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:

Safety glasses are recommended to avoid contact with eyes.

### SKIN PROTECTION REQUIREMENTS:

Wear leather gloves to minimize skin contamination.

### RESPIRATORY PROTECTION REQUIREMENTS:

Use a NIOSH approved organic vapor respirator when exposed to vapor from heated material.

### EXPOSURE GUIDELINES:

#### COBALT

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

#### CHROMIUM

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

#### MOLYBDENUM

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

#### SILICON

OSHA PEL: 15 mg/m<sup>3</sup>  
OSHA TWA: 10 mg/m<sup>3</sup>

## 9. PHYSICAL AND CHEMICAL PROPERTIES

FORM .....: Ingot  
COLOR .....: Silver  
ODOR .....: None  
BOILING POINT .....: 2750 F  
SOLUBILITY IN WATER .....: Insoluble  
SPECIFIC GRAVITY .....: 8.2 (Water = 1)  
MELTING/FREEZING POINT ...: 2430-2485 F

## 10. STABILITY AND REACTIVITY

### STABILITY:

Stable.

### POLYMERIZATION:



(section 10 continued)

Product will not undergo polymerization.

**INCOMPATIBILITY WITH OTHER MATERIALS:**

Mineral acids and strong oxidizing agents.

**DECOMPOSITION:**

Metal oxides may be generated from melting.

**11. TOXICOLOGICAL INFORMATION**

**CHRONIC EFFECTS /:**

May cause respiratory disease.

**COBALT**

Test Code: Oral LD50

Species: Rat

Results: 1500 mg/kg

**CHROMIUM**

Test Code: Implant TDLO

Species: Rat

Results: 1200 micrograms/kg of body weight administered  
intermittently over a six week period.

**MOLYBDENUM**

Test Code: Intraperitoneal LD50

Species: Rat

Results: 114 mg/kg

**12. ECOLOGICAL INFORMATION**

**MISCELLANEOUS:**

Dike and contain spill with absorbent material such as clay or commercial absorbent.

**13. DISPOSAL CONSIDERATIONS**

**WASTE DISPOSAL:**

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



## 14. TRANSPORTATION INFORMATION

PRODUCT LABEL .....: Beta Plus Alloy  
D.O.T. SHIPPING NAME .....: N/A  
TECHNICAL SHIPPING NAME ...: N/A  
D.O.T. HAZARD CLASS .....: N/A  
UN NUMBER .....: N/A

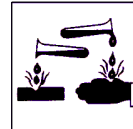
## 15. REGULATORY INFORMATION

### 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:

Irritant (Xi), Corrosive (C)



### R-Phrases:

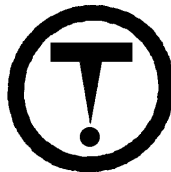
R36/37/38 - Irritating to eyes, respiratory system, and skin.

### S-Phrases:

S3 - Keep in a cool place.

### WHMIS Hazard Symbols:

Class D2 - Materials Causing Other Toxic Effects



### Canadian Disclosure List

COBALT (7440-48-4)  
CHROMIUM (7440-47-3)  
MOLYBDENUM (7439-98-7)

### SARA Title III - Section 313

COBALT (7440-48-4)  
CHROMIUM (7440-47-3)



(section 15 continued)

**CERCLA Hazardous Substances**

CHROMIUM (7440-47-3) -- RQ 5000 lb

**RCRA Hazardous Substances**

CHROMIUM (7440-47-3) -- RCRA Code: D007

**Title V**

COBALT (7440-48-4)  
CHROMIUM (7440-47-3)

**CA Proposition 65**

COBALT (7440-48-4)

**SC Toxic Air Pollutants List**

CHROMIUM (7440-47-3)  
MOLYBDENUM (7439-98-7)  
SILICON (7440-21-3)

**16. OTHER INFORMATION**

REASON FOR ISSUE ....: Update  
PREPARED BY .....: Phyll Tabone  
APPROVED BY .....: Abdul Khan  
TITLE .....: Q. C. Manager  
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SUPERCEDES DATE ....: New  
MSDS NUMBER .....: 801050K  
RTN NUMBER .....: 00000329 (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

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**END OF MSDS**  
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