

# SUPPLIER



## MATERIAL SAFETY DATA SHEET

**GENERATED** 03/15/2011, **REVISION** 07/27/2006, **SUPERCEDES REVISION** 08/26/2004,  
**DATE CREATED** 12/26/1990

### SECTION I - PRODUCT IDENTIFICATION

Chromium metal, pieces

**PRODUCT NAME:** Chromium metal, pieces

**PRODUCT CODE:** C-MSDS0055

**REFERENCE #:** 7440-47-3

#### **MANUFACTURER INFORMATION**

**COMPANY NAME:** Materion Advanced Chemicals Inc.  
 1316 W. St. Paul Avenue  
 Milwaukee, WI 53233

**EMERGENCY CONTACT:** CHEMTREC (800)424-9300

**ALTERNATE EMERGENCY CONTACT:** Materion Advanced Chemicals Inc. (414)289-9800

**CHEMICAL FAMILY:** Metal

**CAS NUMBER:** 7440-47-3

**RTECS #:** GB4200000

**FORMULA:** Cr

**MOLECULAR WEIGHT:** 51.99

**UPC/EAN:** 231-157-5

#### **SYNONYMS**

Chromium metal, chrome

### SECTION II - HAZARDOUS INGREDIENTS/IDENTITY INFORMATION

Chromium metal, pieces

| Hazardous Components<br>(Chemical Name) | CAS # | Concentration | OSHA PEL | ACGIH TLV | Other Limits |
|---|-------|---------------|----------|-----------|--------------|
|---|-------|---------------|----------|-----------|--------------|

|                                  |           |              |         |           |    |
|----------------------------------|-----------|--------------|---------|-----------|----|
| Chromium                         | 7440-47-3 | 0.0 -100.0 % | 1 mg/m3 | 0.5 mg/m3 | NE |
| See SECTION 16-Other Information | NA        | 0.0 -100.0 % | NA      | NA        | NA |

### SECTION III - PHYSICAL/CHEMICAL CHARACTERISTICS

#### Chromium metal, pieces

|  |                |            |             |
|--|----------------|------------|-------------|
| <b><u>PHYSICAL STATES:</u></b>                       | [ ] Gas        | [ ] Liquid | [ X ] Solid |
| <b><u>MELTING POINT:</u></b>                         | 1857.00 C      |            |             |
| <b><u>BOILING POINT:</u></b>                         | 2672.00 C      |            |             |
| <b><u>SPECIFIC GRAVITY (WATER = 1):</u></b>          | 7.20 at 28.0 C |            |             |
| <b><u>VAPOR PRESSURE (VS. AIR OR MM HG):</u></b>     | 1 at 1616.0 C  |            |             |
| <b><u>VAPOR DENSITY (VS. AIR = 1):</u></b>           |                |            |             |
| <b><u>EVAPORATION RATE (VS BUTYL ACETATE=1):</u></b> |                |            |             |
| <b><u>SOLUBILITY IN WATER:</u></b>                   | insoluble      |            |             |
| <b><u>SOLUBILITY NOTES</u></b>                       |                |            |             |
| <b><u>PERCENT VOLATILE:</u></b>                      | N.A.           |            |             |
| <b><u>APPEARANCE AND ODOR</u></b>                    |                |            |             |
| Steel gray pieces, no odor.                          |                |            |             |

### SECTION IV - FIRE AND EXPLOSION HAZARD DATA

#### Chromium metal, pieces

|   |           |         |  |
|---|-----------|---------|--|
| <b><u>FLASH PT:</u></b>                     | N.A.      |         |  |
| <b><u>EXPLOSIVE LIMITS:</u></b>             | LEL: NA   | UEL: NA |  |
| <b><u>AUTOIGNITION PT:</u></b>              | 1890.00 C |         |  |
| <b><u>EXTINGUISHING MEDIA</u></b>           |           |         |  |
| AUTOIGNITION TEMPERATURE: 1890 C for pieces |           |         |  |

USE: Not applicable. Use suitable extinguishing agent for surrounding materials and type of fire.

#### **SPECIAL FIRE FIGHTING PROCEDURES**

Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate runoff to prevent environmental pollution.

#### **UNUSUAL FIRE AND EXPLOSION HAZARDS**

Chromium reacts violently or explosively when heated with ammonium nitrate and bromine pentafluoride.

Chromium has an incandescent reaction with nitrogen oxide or sulfur dioxide.

**HAZARDOUS COMBUSTION PRODUCTS****SECTION V - REACTIVITY DATA**  
**Chromium metal, pieces****STABILITY:**Unstable [ ☐ ]      Stable [ ☒ ]**CONDITIONS TO AVOID - INSTABILITY**

None

**INCOMPATIBILITY - MATERIALS TO AVOID**

Strong oxidizing agents, dilute acids, strong alkalis, nitrogen oxide, potassium chlorate, sulfur dioxide, molten lithium at 18C, fused ammonium nitrate below 200C, ammonium nitrite, bromine pentafluoride and carbon dioxide.

**HAZARDOUS DECOMPOSITION OR BYPRODUCTS**

Chromium oxide fumes

**HAZARDOUS POLYMERIZATION:**Will occur [ ☐ ]      Will not occur  
[ ☒ ]**CONDITIONS TO AVOID - HAZARDOUS POLYMERIZATION**

None

**SECTION VI - HEALTH HAZARD DATA**  
**Chromium metal, pieces****HEALTH HAZARDS (ACUTE AND CHRONIC)**

CHROMIUM: Confirmed human carcinogen with experimental tumorigenic data. Human poison by ingestion with gastrointestinal effects. (Sax, Dangerous Properties of Industrial Materials)

**INHALATION:**

Acute: May cause a red, dry throat.

Chronic: May cause histologic fibrosis of lungs, nasal and/or lung cancer.

**INGESTION:**

Acute: May cause gastrointestinal disorders.

Chronic: No chronic health effects recorded.

SKIN: Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

**EYE:**

Acute: May cause abrasive irritation.

Chronic: No chronic health effects recorded.

TARGET ORGANS: May affect the respiratory system.

**CARCINOGENICITY:** NTP? Yes      IARC Monographs? No      OSHA Regulated? No

## **CARCINOGENICITY/OTHER INFORMATION**

ivn-rat TDLo: 2160 ug/kg/6W-I:ETA

imp-rat TDLo: 1200 ug/kg/6WI TFX:ETA

orl-hmn LDLo: 71 mg/kg:GIT

imp-rbt TDLo: 75 mg/kg: ETA

## **RECOMMENDED EXPOSURE LIMITS**

See "Section II"

## **LD 50 / LC 50**

See "Carcinogenicity/Other Information"

## **SIGNS AND SYMPTOMS OF EXPOSURE**

INHALATION: May cause a red, dry throat, coughing and shortness of breath.

INGESTION: May cause gastritis, convulsions, asphyxia, giddiness, nausea, diarrhea and vomiting.

SKIN: May cause redness and itching.

EYE: May cause redness, itching and watering.

## **MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE**

Pre-existing respiratory disorders, pulmonary functions and asthma.

## **EMERGENCY AND FIRST AID PROCEDURES**

INHALATION: Remove victim to fresh air; keep warm and quiet; give oxygen if breathing is difficult and seek medical attention.

INGESTION: Give 1-2 glasses of milk or water and induce vomiting; seek medical attention immediately. Never induce vomiting or give anything by mouth to an unconscious person.

SKIN: Remove contaminated clothing; brush material off skin; wash affected area with mild soap and water; seek medical attention if symptoms persist.

EYE: Flush eyes with lukewarm water, lifting upper and lower eyelids, for at least 15 minutes. Seek medical attention if symptoms persist.

## **SECTION VII - PRECAUTIONS FOR SAFE HANDLING AND USE**

### **Chromium metal, pieces**

## **STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED**

Wear appropriate respiratory and protective equipment specified in section VIII-control measures. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for proper disposal. Take care not to raise dust.

## **WASTE DISPOSAL METHOD**

Dispose of in accordance with local, state and federal regulations.

## **RCRA WASTE ID CODE:**

D007

## **HAZARD LABEL INFORMATION:**

Store in cool, dry area      Store in tightly sealed container      Wash thoroughly after handling

**PRECAUTIONS TO BE TAKEN IN HANDLING**

None

**PRECAUTIONS TO BE TAKEN IN STORING**

None

**OTHER PRECAUTIONS**

None

**SECTION VIII - CONTROL MEASURES**  
**Chromium metal, pieces**

**PROTECTIVE EQUIPMENT SUMMARY - HAZARD LABEL INFORMATION:**

NIOSH approved respirator      Impervious gloves      Safety glasses      Clothes to prevent skin contact

**RESPIRATORY EQUIPMENT (SPECIFY TYPE)**

NIOSH approved respirator

**EYE PROTECTION**

Safety glasses

**PROTECTIVE GLOVES**

Rubber gloves

**OTHER PROTECTIVE CLOTHING**

Protective gear suitable to prevent contamination

**VENTILATION**

Local exhaust ventilation may be necessary to control any air contaminants to within their PELs or TLVs during the use of this product.

Good general ventilation is recommended.

**WORK/HYGIENIC/MAINTENANCE PRACTICES**

Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

**SECTION IX - ADDITIONAL COMMENTS**  
**Chromium metal, pieces**

Control of Substances Hazardous to Health Regulations  
EH40 Occupational Exposure Limits

Maximum Exposure Limit: 0.05 mg/m<sup>3</sup>

Occupational Exposure Standard: 0.5 mg/m<sup>3</sup>

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