



# SAFETY DATA SHEET

**MATERION**

## 1. Identification

**Product identifier** Aluminum-Chromium Powder  
**Other means of identification** None.  
**Manufacturer/Importer/Supplier/Distributor information**  
**Manufacturer**  
**Company name** Materion Advanced Chemicals Inc.  
**Address** 407 N 13th Street  
1316 W. St. Paul Avenue  
Milwaukee, WI 53233  
United States  
**Telephone** 414.212.0257  
**E-mail** advancedmaterials@materion.com  
**Contact person** Noreen Atkinson  
**Emergency phone number** Chemtrec 800.424.9300

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 1  
Hazardous to the aquatic environment, long-term hazard Category 1  
**OSHA defined hazards** Not classified.

### Label elements



**Signal word** Danger  
**Hazard statement** May cause an allergic skin reaction. Causes eye irritation. May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. Suspected of causing genetic defects. May cause damage to organs (H373). Causes damage to organs (respiratory system) through prolonged or repeated exposure. Very toxic to aquatic life. Toxic to aquatic life with long lasting effects.  
**Precautionary statement**  
**Prevention** Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Wash thoroughly after handling. Do not eat, drink or smoke when using this product. Use only outdoors or in a well-ventilated area. Contaminated work clothing must not be allowed out of the workplace. Avoid release to the environment. Wear protective gloves. In case of inadequate ventilation wear respiratory protection.  
**Response** Collect spillage. If on skin: Wash with plenty of water. If inhaled: Remove person to fresh air and keep comfortable for breathing. If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If exposed or concerned: Get medical advice/attention. Call a poison center/doctor. Specific treatment (see this label). If skin irritation or rash occurs: Get medical advice/attention. If eye irritation persists: Get medical advice/attention. Wash contaminated clothing before reuse.  
**Storage** Store in a well-ventilated place. Keep container tightly closed. Store locked up.

<b>Disposal</b>	Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazard(s) not otherwise classified (HNOC)</b>	None known.
<b>Supplemental information</b>	None.

### 3. Composition/information on ingredients

#### Mixtures

Chemical name	Common name and synonyms	CAS number	%
Chromium		7440-47-3	75 - 97.5
Aluminum		7429-90-5	2.5 - 25

\*Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

### 4. First-aid measures

<b>Inhalation</b>	Remove victim to fresh air and keep at rest in a position comfortable for breathing. Move to fresh air. If breathing is difficult, remove to fresh air and keep at rest in a position comfortable for breathing. Oxygen or artificial respiration if needed. Do not use mouth-to-mouth method if victim inhaled the substance. Induce artificial respiration with the aid of a pocket mask equipped with a one-way valve or other proper respiratory medical device. If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician. Call a POISON CENTER or doctor/physician if you feel unwell.
<b>Skin contact</b>	Wash off with soap and plenty of water. Get medical attention if irritation develops and persists. If skin irritation or rash occurs: Get medical advice/attention. For minor skin contact, avoid spreading material on unaffected skin.
<b>Eye contact</b>	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. If eye irritation persists: Get medical advice/attention.
<b>Ingestion</b>	Get medical advice/attention if you feel unwell.
<b>Most important symptoms/effects, acute and delayed</b>	Irritation of eyes and mucous membranes. May cause allergic skin reaction. May cause allergic respiratory reaction. Discomfort in the chest. Shortness of breath. Coughing. Prolonged exposure may cause chronic effects.
<b>Indication of immediate medical attention and special treatment needed</b>	Provide general supportive measures and treat symptomatically. Treat symptomatically. Symptoms may be delayed.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. IF exposed or concerned: Get medical advice/attention. Wash contaminated clothing before reuse.

### 5. Fire-fighting measures

<b>Suitable extinguishing media</b>	Powder. Dry sand.
<b>Unsuitable extinguishing media</b>	Water. Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO2).
<b>Specific hazards arising from the chemical</b>	Not applicable.
<b>Special protective equipment and precautions for firefighters</b>	Wear suitable protective equipment.
<b>Fire fighting equipment/instructions</b>	Water runoff can cause environmental damage.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.

### 6. Accidental release measures

<b>Personal precautions, protective equipment and emergency procedures</b>	Local authorities should be advised if significant spillages cannot be contained. Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Keep out of low areas. Wear appropriate protective equipment and clothing during clean-up. Do not touch damaged containers or spilled material unless wearing appropriate protective clothing. Ensure adequate ventilation.
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**Methods and materials for containment and cleaning up**

This material is classified as a water pollutant under the Clean Water Act and should be prevented from contaminating soil or from entering sewage and drainage systems which lead to waterways. Stop the flow of material, if this is without risk. Collect spillage. Prevent entry into waterways, sewer, basements or confined areas. For waste disposal, see section 13 of the SDS.

**Environmental precautions**

Avoid release to the environment. Contact local authorities in case of spillage to drain/aquatic environment. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**7. Handling and storage****Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with skin. Avoid contact with eyes. Use personal protective equipment as required. Wash hands thoroughly after handling. Avoid release to the environment. Do not empty into drains.

**Conditions for safe storage, including any incompatibilities**

Store locked up. Keep container tightly closed. Store in a cool, dry place out of direct sunlight. Store in a well-ventilated place. Keep out of the reach of children.

**8. Exposure controls/personal protection****Occupational exposure limits****US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)**

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	PEL	5 mg/m <sup>3</sup>	Respirable dust.
		15 mg/m <sup>3</sup>	Total dust.
Chromium (CAS 7440-47-3)	PEL	1 mg/m <sup>3</sup>	

**US. ACGIH Threshold Limit Values**

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m <sup>3</sup>	

**US. NIOSH: Pocket Guide to Chemical Hazards**

Components	Type	Value	Form
Aluminum (CAS 7429-90-5)	TWA	5 mg/m <sup>3</sup>	Respirable.
		5 mg/m <sup>3</sup>	Welding fume or pyrophoric powder.
		10 mg/m <sup>3</sup>	Total
Chromium (CAS 7440-47-3)	TWA	0.5 mg/m <sup>3</sup>	

**Biological limit values**

No biological exposure limits noted for the ingredient(s).

**Individual protection measures, such as personal protective equipment****Eye/face protection**

Chemical goggles are recommended.

**Skin protection****Hand protection**

Wear protective gloves. Not normally needed.

**Other**

Wear appropriate chemical resistant clothing. Wear protective gloves.

**Respiratory protection**

Wear positive pressure self-contained breathing apparatus (SCBA).

**Thermal hazards**

Not available.

**General hygiene considerations**

Avoid contact with skin. Wash hands before breaks and immediately after handling the product. Contaminated work clothing should not be allowed out of the workplace. Handle in accordance with good industrial hygiene and safety practice.

**9. Physical and chemical properties****Appearance****Physical state**

Solid.

**Form**

Solid. Powder

**Color**

Not available.

Odor	Not applicable.
Odor threshold	Not available.
pH	Not available.
Melting point/freezing point	1220 °F (660 °C) estimated
Initial boiling point and boiling range	4220.6 °F (2327 °C) estimated
Flash point	Not available.
Evaporation rate	Not available.
Flammability (solid, gas)	Not applicable.
<b>Upper/lower flammability or explosive limits</b>	
Flammability limit - lower (%)	Not available.
Flammability limit - upper (%)	Not available.
Explosive limit - lower (%)	Not available.
Explosive limit - upper (%)	Not available.
Vapor pressure	0.00001 hPa estimated
Vapor density	Not available.
Relative density	Not available.
<b>Solubility(ies)</b>	
Solubility (water)	Not available.
Partition coefficient (n-octanol/water)	Not available.
Auto-ignition temperature	Not applicable.
Decomposition temperature	Not available.
Viscosity	Not available.
<b>Other information</b>	
Density	5.53 g/cm <sup>3</sup> estimated
Specific gravity	5.53 estimated

## 10. Stability and reactivity

Reactivity	Not available.
Chemical stability	Material is stable under normal conditions.
Possibility of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	None under normal conditions.
Incompatible materials	Strong oxidizing agents.
Hazardous decomposition products	No hazardous decomposition products are known.

## 11. Toxicological information

### Information on likely routes of exposure

Inhalation	May cause irritation to the respiratory system. May cause allergy or asthma symptoms or breathing difficulties if inhaled.
Skin contact	May cause an allergic skin reaction.
Eye contact	Causes eye irritation.
Ingestion	Due to lack of data the classification is not possible.

**Symptoms related to the physical, chemical and toxicological characteristics** Discomfort in the chest. Shortness of breath. Coughing.

**Information on toxicological effects**

**Acute toxicity** May cause allergy or asthma symptoms or breathing difficulties if inhaled. May cause respiratory irritation. May cause allergic skin reaction.

**Skin corrosion/irritation** Due to lack of data the classification is not possible.

**Serious eye damage/eye irritation** Causes eye irritation.

**Respiratory or skin sensitization**

**Respiratory sensitization** May cause allergy or asthma symptoms or breathing difficulties if inhaled.

**Skin sensitization** May cause an allergic skin reaction.

**Germ cell mutagenicity** Suspected of causing genetic defects.

**Carcinogenicity** This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA.

**IARC Monographs. Overall Evaluation of Carcinogenicity**

Chromium (CAS 7440-47-3) 3 Not classifiable as to carcinogenicity to humans.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Reproductive toxicity** Due to lack of data the classification is not possible.

**Specific target organ toxicity - single exposure** Respiratory tract irritation. May cause damage to organs ().

**Specific target organ toxicity - repeated exposure** Causes damage to organs () through prolonged or repeated exposure.

**Aspiration hazard** Due to lack of data the classification is not possible.

**Chronic effects** Causes damage to organs through prolonged or repeated exposure.

**12. Ecological information**

**Ecotoxicity** Very toxic to aquatic life. Toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.

Product	Species	Test Results
Aluminum-Chromium Powder		
<b>Aquatic</b>		
Fish	LC50 Fish	5.9829 mg/l, 96 hours estimated
Components	Species	Test Results
Aluminum (CAS 7429-90-5)		
<b>Aquatic</b>		
Fish	LC50 Rainbow trout,donaldson trout (Oncorhynchus mykiss)	0.16 mg/l, 96 hours
Chromium (CAS 7440-47-3)		
<b>Aquatic</b>		
Fish	LC50 Carp (Cyprinus carpio)	14.3 mg/l, 96 hours

\* Estimates for product may be based on additional component data not shown.

**Persistence and degradability** No data is available on the degradability of this product.

**Bioaccumulative potential** Not available.

**Mobility in soil** Not available.

**Other adverse effects** Not available.

### 13. Disposal considerations

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Incinerate the material under controlled conditions in an approved incinerator. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
<b>Hazardous waste code</b>	D007: Waste Chromium
<b>Waste from residues / unused products</b>	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
<b>Contaminated packaging</b>	Empty containers should be taken to an approved waste handling site for recycling or disposal. Since emptied containers may retain product residue, follow label warnings even after container is emptied.

### 14. Transport information

#### DOT

<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substances, solid, n.o.s. (Aluminum)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	8, 146, 335, A112, B54, IB8, IP3, N20, T1, TP33
<b>Packaging exceptions</b>	155
<b>Packaging non bulk</b>	213
<b>Packaging bulk</b>	240

#### IATA

<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	Yes
<b>ERG Code</b>	9L
<b>Special precautions for user</b>	Not available.
<b>Other information</b>	
<b>Passenger and cargo aircraft</b>	Allowed.
<b>Cargo aircraft only</b>	Allowed.

#### IMDG

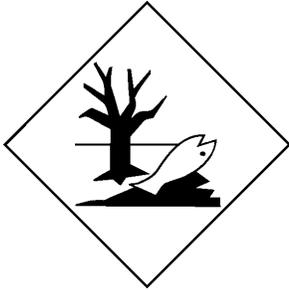
<b>UN number</b>	UN3077
<b>UN proper shipping name</b>	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>EmS</b>	F-A, S-F

Special precautions for user Not available.

DOT; IATA; IMDG



Marine pollutant



General information DOT Regulated Marine Pollutant. IMDG Regulated Marine Pollutant.

## 15. Regulatory information

US federal regulations All components are on the U.S. EPA TSCA Inventory List.

**TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)**

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Chromium (CAS 7440-47-3) Listed.

**US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)**

Not listed.

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**Hazard categories** Immediate Hazard - No  
Delayed Hazard - No  
Fire Hazard - No  
Pressure Hazard - No  
Reactivity Hazard - No

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Chromium	7440-47-3	75 - 97.5
Aluminum	7429-90-5	2.5 - 25

**Other federal regulations**

**Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List**

Chromium (CAS 7440-47-3)

**Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)**

Not regulated.

**Safe Drinking Water Act (SDWA)** Not regulated.

**US state regulations** California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

**US - New Jersey RTK - Substances: Listed substance**

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

**US - Pennsylvania RTK - Hazardous Substances: All compounds of this substance are considered environmental hazards**

Chromium (CAS 7440-47-3)

**US - Pennsylvania RTK - Hazardous Substances: Special hazard**

Chromium (CAS 7440-47-3)

**US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)**

Not listed.

**US. California. Candidate Chemicals List. Safer Consumer Products Regulations (Cal. Code Regs, tit. 22, 69502.3, subd. (a))**

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

**US. Massachusetts RTK - Substance List**

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

**US. New Jersey Worker and Community Right-to-Know Act**

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

**US. Pennsylvania RTK - Hazardous Substances**

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

**US. Pennsylvania Worker and Community Right-to-Know Law**

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

**US. Rhode Island RTK**

Aluminum (CAS 7429-90-5)

Chromium (CAS 7440-47-3)

**US. California Proposition 65**

Not Listed.

**16. Other information, including date of preparation or last revision**

**Issue date** 05-26-2015

**Version #** 01

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