

## Safety Data Sheet acc. to OSHA HCS

Printing date 01/02/2017

Reviewed on 01/02/2017

### 1 Identification

**Product identifier**Trade name: **AMACAST**Application of the substance / the mixture *Cast Chrome Steel abrasive***Details of the supplier of the safety data sheet****Manufacturer/Supplier:***Ervin Industries, Inc.**3893 Research Park Drive**Ann Arbor, MI 48108-2217**Phone: (734)-769-4600/Fax: (734)-663-0136**sales@ervinindustries.com**http://www.ervinindustries.com/***Information department:***Quality Assurance Department**(mo-thu: 8a.m.-4p.m., fr 8a.m.-1p.m.)***Emergency telephone number:** *Phone: (734)-769-4600/Fax: (734)-663-0136*

### 2 Hazard(s) identification

**Classification of the substance or mixture***The product is not classified according to the Globally Harmonized System (GHS).***Label elements**GHS label elements *Void*Hazard pictograms *Void*Signal word *Void*Hazard statements *Void***Classification system:****NFPA ratings (scale 0 - 4)***Health = 0**Fire = 0**Reactivity = 0***HMIS-ratings (scale 0 - 4)***HEALTH 0 Health = 0**FIRE 0 Fire = 0**REACTIVITY 0 Reactivity = 0***Other hazards****Results of PBT and vPvB assessment****PBT:** *Not applicable.***vPvB:** *Not applicable.*

### 3 Composition/information on ingredients

**Chemical characterization: Mixtures****Description:** *Mixture: consisting of the following components.***Dangerous components:**

CAS: 7440-47-3	chromium	<20%
CAS: 7440-02-0 Reg.nr.: 01-2119438727-29	nickel	<10%
CAS: 7440-21-3	silicon	<3%

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CAS: 7439-96-5	manganese	<2%
CAS: 7440-44-0	carbon	<0.25%

### 4 First-aid measures

#### Description of first aid measures

**General information:** No special measures required.

**After inhalation:** Supply fresh air; consult doctor in case of complaints.

**After skin contact:**

Generally the product does not irritate the skin.

Rinse with warm water.

If skin irritation continues, consult a doctor.

**After eye contact:** Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.

**After swallowing:**

Rinse out mouth and then drink plenty of water.

If symptoms persist consult doctor.

**Information for doctor:**

**Most important symptoms and effects, both acute and delayed** No further relevant information available.

**Indication of any immediate medical attention and special treatment needed**

No further relevant information available.

### 5 Fire-fighting measures

#### Extinguishing media

**Suitable extinguishing agents:** CO<sub>2</sub>, sand, extinguishing powder. Do not use water.

**For safety reasons unsuitable extinguishing agents:** Water with full jet

**Special hazards arising from the substance or mixture** No further relevant information available.

#### Advice for firefighters

**Protective equipment:**

Do not inhale explosion gases or combustion gases.

Wear self-contained respiratory protective device.

#### Additional information

Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.

### 6 Accidental release measures

#### Personal precautions, protective equipment and emergency procedures

Avoid formation of dust.

Product forms slippery surface when combined with water.

Use respiratory protective device against the effects of fumes/dust/aerosol.

**Environmental precautions:** Do not allow to enter sewers/ surface or ground water.

**Methods and material for containment and cleaning up:** Pick up mechanically.

#### Reference to other sections

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

See Section 13 for disposal information.

#### Protective Action Criteria for Chemicals

PAC-1:		
7439-89-6	iron	3.2 mg/m <sup>3</sup>
7440-47-3	chromium	1.5 mg/m <sup>3</sup>
7440-21-3	silicon	45 mg/m <sup>3</sup>
7440-44-0	carbon	6 mg/m <sup>3</sup>
PAC-2:		
7439-89-6	iron	35 mg/m <sup>3</sup>
7440-47-3	chromium	17 mg/m <sup>3</sup>
7440-21-3	silicon	100 mg/m <sup>3</sup>
7440-44-0	carbon	330 mg/m <sup>3</sup>

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<b>PAC-3:</b>		
7439-89-6	iron	150 mg/m3
7440-47-3	chromium	99 mg/m3
7440-21-3	silicon	630 mg/m3
7440-44-0	carbon	2,000 mg/m3

## 7 Handling and storage

**Handling:**

**Precautions for safe handling** *No special measures required.*  
**Information about protection against explosions and fires:** *No special measures required.*

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

**Storage:**  
**Requirements to be met by storerooms and receptacles:** *No special requirements.*  
**Information about storage in one common storage facility:** *Not required.*  
**Further information about storage conditions:** *None.*  
**Specific end use(s)** *No further relevant information available.*

## 8 Exposure controls/personal protection

**Additional information about design of technical systems:** *No further data; see item 7.*

**Control parameters**

**Components with limit values that require monitoring at the workplace:**  
*The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.*  
*At this time, the other constituents have no known exposure limits.*

<b>7440-47-3 chromium</b>	
PEL	Long-term value: 1 mg/m <sup>3</sup>
REL	Long-term value: 0.5* mg/m <sup>3</sup> *metal+inorg.compds.as Cr; See Pocket Guide App. C
TLV	Long-term value: 0.5 mg/m <sup>3</sup>
<b>7440-21-3 silicon</b>	
PEL	Long-term value: 15* 5** mg/m <sup>3</sup> *total dust **respirable fraction
REL	Long-term value: 10* 5** mg/m <sup>3</sup> *total dust **respirable fraction
TLV	TLV withdrawn
<b>7439-96-5 manganese</b>	
PEL	Ceiling limit value: 5 mg/m <sup>3</sup> as Mn
REL	Short-term value: 3 mg/m <sup>3</sup> Long-term value: 1 mg/m <sup>3</sup> fume, as Mn
TLV	Long-term value: 0.02* 0.1* mg/m <sup>3</sup> as Mn; *respirable **inhalable fraction

**Additional information:** *The lists that were valid during the creation were used as basis.*

**Exposure controls**

**Personal protective equipment:**  
**General protective and hygienic measures:**  
*The usual precautionary measures for handling chemicals should be followed.*  
**Breathing equipment:** Filter P2  
**Protection of hands:**  
 Leather gloves  
*Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation*

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**Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

**Penetration time of glove material**

The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.

The determined penetration times according to EN 374 part III are not performed under practical conditions.

Therefore a maximum wearing time, which corresponds to 50% of the penetration time, is recommended.

**Eye protection:**

Tightly sealed goggles

**Body protection:** Protective work clothing

### 9 Physical and chemical properties

**Information on basic physical and chemical properties****General Information****Appearance:**

<b>Form:</b>	Solid
<b>Color:</b>	Dark grey
<b>Odor:</b>	Odorless
<b>Odor threshold:</b>	Not determined.

**pH-value:** Not applicable.

**Change in condition**

<b>Melting point/Melting range:</b>	1371-1483 °C (2500-2701 °F)
<b>Boiling point/Boiling range:</b>	2850-3150 °C (5162-5702 °F)
<b>Flash point:</b>	Not applicable.
<b>Flammability (solid, gaseous):</b>	Not determined.

**Ignition temperature:**

<b>Decomposition temperature:</b>	Not determined.
<b>Auto igniting:</b>	Product is not selfigniting.
<b>Danger of explosion:</b>	Product does not present an explosion hazard.
<b>Explosion limits:</b>	

<b>Lower:</b>	Not determined.
<b>Upper:</b>	Not determined.

<b>Vapor pressure:</b>	Not applicable.
<b>Density at 20 °C (68 °F):</b>	>7.6 g/cm <sup>3</sup> (>63.422 lbs/gal)
<b>Relative density</b>	Not determined.
<b>Vapor density</b>	Not applicable.
<b>Evaporation rate</b>	Not applicable.
<b>Solubility in / Miscibility with</b>	
<b>Water:</b>	Insoluble.

**Partition coefficient (n-octanol/water):** Not determined.

**Viscosity:**

<b>Dynamic:</b>	Not applicable.
<b>Kinematic:</b>	Not applicable.

**Solvent content:**

<b>Organic solvents:</b>	0.0 %
<b>VOC content:</b>	0.0 g/l / 0.00 lb/gl
<b>Solids content:</b>	100 %

**Other information**

No further relevant information available.

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### 10 Stability and reactivity

**Reactivity** No further relevant information available.

**Chemical stability**

**Thermal decomposition / conditions to be avoided:** No decomposition if used according to specifications.

**Possibility of hazardous reactions** No dangerous reactions known.

**Conditions to avoid** No further relevant information available.

**Incompatible materials:** No further relevant information available.

**Hazardous decomposition products:** No dangerous decomposition products known.

### 11 Toxicological information

**Information on toxicological effects**

**Acute toxicity:**

**Primary irritant effect:**

**on the skin:** No irritant effect.

**on the eye:** No irritating effect.

**Sensitization:**

Examination nickel release in accordance with DIN EN 1811: 2012-10: done

Sample Number 2016-00916

<0.1 µg per cm<sup>2</sup> and week

therefore no sensitization detected.

**Additional toxicological information:**

The product is not subject to classification according to internally approved calculation methods for preparations:

When used and handled according to specifications, the product does not have any harmful effects according to our experience and the information provided to us.

**Carcinogenic categories**

IARC (International Agency for Research on Cancer)		
7440-47-3	chromium	3
7440-02-0	nickel	1
NTP (National Toxicology Program)		
7440-02-0	nickel	R
OSHA-Ca (Occupational Safety & Health Administration)		
None of the ingredients is listed.		

### 12 Ecological information

**Toxicity**

**Aquatic toxicity:** No further relevant information available.

**Persistence and degradability** No further relevant information available.

**Behavior in environmental systems:**

**Bioaccumulative potential** No further relevant information available.

**Mobility in soil** No further relevant information available.

**Additional ecological information:**

**General notes:**

Water hazard class 1 (Self-assessment): slightly hazardous for water

Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.

**Results of PBT and vPvB assessment**

**PBT:** Not applicable.

**vPvB:** Not applicable.

**Other adverse effects** No further relevant information available.

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**13 Disposal considerations**

**Waste treatment methods**

**Recommendation:**

Contact manufacturer for recycling information.  
completely emptied packaging in 25kg paper bag: paper recycling  
completely emptied packaging in big bags: commercial waste disposal  
completely emptied packaging in steel barrels: metal recycling

**Uncleaned packagings:**

**Recommendation:** Disposal must be made according to official regulations.

**14 Transport information**

<b>UN-Number</b> DOT, ADR, ADN, IMDG, IATA	Void
<b>UN proper shipping name</b> DOT, ADR, ADN, IMDG, IATA	Void
<b>Transport hazard class(es)</b> DOT, ADR, ADN, IMDG, IATA Class	Void
<b>Packing group</b> DOT, ADR, IMDG, IATA	Void
<b>Environmental hazards:</b> Marine pollutant:	No
<b>Special precautions for user</b>	Not applicable.
<b>Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code</b>	Not applicable.
<b>UN "Model Regulation":</b>	Void

**15 Regulatory information**

Safety, health and environmental regulations/legislation specific for the substance or mixture  
Sara

<b>Section 355 (extremely hazardous substances):</b>
None of the ingredient is listed.
<b>Section 313 (Specific toxic chemical listings):</b>
7440-47-3 chromium
7440-02-0 nickel
7439-96-5 manganese
<b>TSCA (Toxic Substances Control Act):</b>
All ingredients are listed.
<b>Proposition 65</b>
<b>Chemicals known to cause cancer:</b>
7440-02-0 nickel
<b>Chemicals known to cause reproductive toxicity for females:</b>
None of the ingredients is listed.
<b>Chemicals known to cause reproductive toxicity for males:</b>
None of the ingredients is listed.
<b>Chemicals known to cause developmental toxicity:</b>
None of the ingredients is listed.

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**Carcinogen categories**

EPA (Environmental Protection Agency)		
7440-47-3	chromium	D
7439-96-5	manganese	D
TLV (Threshold Limit Value established by ACGIH)		
7440-47-3	chromium	A4
7440-02-0	nickel	A5
NIOSH-Ca (National Institute for Occupational Safety and Health)		
7440-02-0	nickel	

GHS label elements *Void*Hazard pictograms *Void*Signal word *Void*Hazard statements *Void***National regulations:**Information about limitation of use: *Employment restrictions concerning young persons must be observed.*Water hazard class: *Water hazard class 1 (Self-assessment): slightly hazardous for water.*Chemical safety assessment: *A Chemical Safety Assessment has not been carried out.*

### 16 Other information

*This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.*

Contact: *Dr. W. Assmann*Date of preparation / last revision *01/02/2017 / 4***Abbreviations and acronyms:**ADR: *Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)*IMDG: *International Maritime Code for Dangerous Goods*DOT: *US Department of Transportation*IATA: *International Air Transport Association*ACGIH: *American Conference of Governmental Industrial Hygienists*EINECS: *European Inventory of Existing Commercial Chemical Substances*ELINCS: *European List of Notified Chemical Substances*CAS: *Chemical Abstracts Service (division of the American Chemical Society)*NFPA: *National Fire Protection Association (USA)*HMIS: *Hazardous Materials Identification System (USA)*VOC: *Volatile Organic Compounds (USA, EU)*PBT: *Persistent, Bioaccumulative and Toxic*vPvB: *very Persistent and very Bioaccumulative*NIOSH: *National Institute for Occupational Safety*OSHA: *Occupational Safety & Health*TLV: *Threshold Limit Value*PEL: *Permissible Exposure Limit*REL: *Recommended Exposure Limit*