



# PRODUCT INFORMATION SHEET

**MATERION**

## SECTION 1: Identification of the substance/mixture and of the company/undertaking

### 1.1. Product identifier

**Trade name or designation of the mixture** Nickel Chromium Targets  
**Registration number** -  
**Document number** G15  
**Synonyms** None.  
**Issue date** 27-November-2018  
**Version number** 03  
**Revision date** 01-July-2021  
**Supersedes date** 01-February-2021

### 1.3. Details of the supplier of the product information sheet

#### Supplier

**Company name** Materion Advanced Materials  
**Address** 6070 Parkland Boulevard  
United States  
**Division**  
**Telephone** 1.216.383.4019  
**e-mail** ehs@materion.com  
**Contact person** Theodore Knudson

**1.4. Emergency telephone number** See Section 16.

### 1.2. Relevant identified uses of the substance or mixture and uses advised against

**Identified uses** Manufacture of computer, electronic and optical products, electrical equipment  
Scientific research and development  
Other: Manufacture of medical and defense equipment  
**Uses advised against** Professional uses: Public domain (administration, education, entertainment, services, craftsmen)  
Consumer uses: Private households (= general public = consumers)

### 1.3. Details of the supplier of the safety data sheet

#### Supplier

**Company name** Materion Advanced Materials  
**Address** 6070 Parkland Boulevard  
United States  
**Division**  
**Telephone** 1.216.383.4019  
**e-mail** ehs@materion.com  
**Contact person** Theodore Knudson

**1.4. Emergency telephone number** See Section 16.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The mixture has been assessed and/or tested for its physical, health and environmental hazards and the following classification applies.

#### Classification according to Regulation (EC) No 1272/2008 as amended

##### Health hazards

|                    |            |   |
|--------------------|------------|---|
| Skin sensitisation | Category 1 | H317 - May cause an allergic skin reaction. |
| Carcinogenicity    | Category 2 | H351 - Suspected of causing cancer.         |

Specific target organ toxicity - repeated exposure

Category 1 (Respiratory system)

H372 - Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

## Hazard summary

May cause an allergic skin reaction. Suspected of causing cancer. Causes damage to organs through prolonged or repeated exposure.

## 2.2. Label elements

### Label according to Regulation (EC) No. 1272/2008 as amended

#### Contains:

Chromium, NICKEL POWDER; [PARTICLE DIAMETER < 1MM]

#### Hazard pictograms



#### Signal word

Danger

#### Hazard statements

H317

May cause an allergic skin reaction.

H351

Suspected of causing cancer.

H372

Causes damage to organs (respiratory system) through prolonged or repeated exposure by inhalation.

## Precautionary statements

### Prevention

P201

Obtain special instructions before use.

P202

Do not handle until all safety precautions have been read and understood.

P260

Do not breathe dust/fume/gas/mist/vapours/spray.

P264

Wash thoroughly after handling.

P270

Do not eat, drink or smoke when using this product.

P272

Contaminated work clothing should not be allowed out of the workplace.

P273

Avoid release to the environment.

P280

Wear protective gloves/protective clothing/eye protection/face protection.

### Response

P302 + P350

If on skin: Wash with plenty of water.

P304 + P341

If inhaled: If breathing is difficult, remove person to fresh air and keep comfortable for breathing.

P308 + P311

If exposed or concerned: Call a poison centre/doctor.

P333 + P313

If skin irritation or rash occurs: Get medical advice/attention.

P342 + P311

If experiencing respiratory symptoms: Call a POISON CENTRE/doctor.

P363

Wash contaminated clothing before reuse.

### Storage

P405

Store locked up.

### Disposal

P501

Dispose of contents/container in accordance with local/regional/national/international regulations.

## Supplemental label information

For further information, please contact the Product Stewardship Department at +1.216.383.4019.

## 2.3. Other hazards

Not a PBT or vPvB substance or mixture.

## SECTION 3: Composition/information on ingredients

### 3.2. Mixtures

#### General information

| Chemical name   | %       | CAS-No. / EC No.       | REACH Registration No. | Index No.    | Notes |
|---|---------|------------------------|------------------------|--------------|-------|
| NICKEL POWDER; [PARTICLE DIAMETER < 1MM]                    | 50 - 99 | 7440-02-0<br>231-111-4 | -                      | 028-002-01-4 |       |
| <b>Classification:</b> Carc. 2;H351, Aquatic Chronic 3;H412 |         |                        |                        |              | 7,S   |
| Chromium  | 1 - 50  | 7440-47-3<br>231-157-5 | -                      | -            | #     |
| <b>Classification:</b> Aquatic Chronic 3;H412               |         |                        |                        |              |       |

## SECTION 4: First aid measures

#### General information

If you feel unwell, seek medical advice (show the label where possible). Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 4.1. Description of first aid measures

|                     |   |
|---------------------|---|
| <b>Inhalation</b>   | Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a physician if symptoms develop or persist. |
| <b>Skin contact</b> | Wash off with soap and water. If skin irritation occurs: Get medical advice/attention. Wash contaminated clothing before reuse.       |
| <b>Eye contact</b>  | Immediately flush eyes with plenty of water for at least 15 minutes. Get medical attention if irritation develops and persists.       |
| <b>Ingestion</b>    | Rinse mouth. If swallowed, seek medical advice immediately and show this container or label.  |

#### 4.2. Most important symptoms and effects, both acute and delayed

Severe eye irritation. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. May cause respiratory irritation. May cause an allergic skin reaction. Dermatitis. Rash.

#### 4.3. Indication of any immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically.

### SECTION 5: Firefighting measures

**General fire hazards** No unusual fire or explosion hazards noted.

#### 5.1. Extinguishing media

**Suitable extinguishing media** Extinguish with foam, carbon dioxide, dry powder or water fog.

**Unsuitable extinguishing media** Do not use water jet as an extinguisher, as this will spread the fire.

#### 5.2. Special hazards arising from the substance or mixture

This product is not flammable.

#### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Wear suitable protective equipment.

**Special firefighting procedures** Move containers from fire area if you can do so without risk.

**Specific methods** Use standard firefighting procedures and consider the hazards of other involved materials.

### SECTION 6: Accidental release measures

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

**For non-emergency personnel** Keep unnecessary personnel away. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. For personal protection, see section 8 of the PIS.

**For emergency responders** Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the PIS.

**6.2. Environmental precautions** Collect spillage.

**6.3. Methods and material for containment and cleaning up** Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk. Following product recovery, flush area with water. Put material in suitable, covered, labeled containers.

**6.4. Reference to other sections** For personal protection, see section 8 of the PIS. For waste disposal, see section 13 of the PIS.

### SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Observe good industrial hygiene practices. Wash hands thoroughly after handling.

**7.2. Conditions for safe storage, including any incompatibilities** Store in a closed container away from incompatible materials.

**7.3. Specific end use(s)** Not relevant.

### SECTION 8: Exposure controls/personal protection

#### 8.1. Control parameters

##### Occupational exposure limits

Hungary. OELs. Joint Decree on Chemical Safety of Workplaces

| Components               | Type | Value               |
|--------------------------|------|---------------------|
| Chromium (CAS 7440-47-3) | TWA  | 2 mg/m <sup>3</sup> |

**Hungary. OELs. Joint Decree on Chemical Safety of Workplaces**

| Components   | Type    | Value                 |
|--|---------|-----------------------|
| NICKEL POWDER;<br>[PARTICLE DIAMETER <<br>1MM] (CAS 7440-02-0) | Ceiling | 0,1 mg/m <sup>3</sup> |

**EU. Indicative Exposure Limit Values in Directives 91/322/EEC, 2000/39/EC, 2006/15/EC, 2009/161/EU, 2017/164/EU**

| Components               | Type | Value               |
|--------------------------|------|---------------------|
| Chromium (CAS 7440-47-3) | TWA  | 2 mg/m <sup>3</sup> |

**Biological limit values****Hungary. Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices**

| Components   | Value           | Determinant | Specimen            | Sampling Time |
|--|-----------------|-------------|---------------------|---------------|
| Chromium (CAS 7440-47-3)                                       | 0,02 mg/g       | chromium    | Creatinine in urine | *             |
|  | 0,043 µmol/mmol | chromium    | Creatinine in urine | *             |
| NICKEL POWDER;<br>[PARTICLE DIAMETER <<br>1MM] (CAS 7440-02-0) | 0,02 mg/g       | Nickel      | Creatinine in urine | *             |
|  | 0,038 µmol/mmol | Nickel      | Creatinine in urine | *             |

\* - For sampling details, please see the source document.

**Recommended monitoring procedures** Follow standard monitoring procedures.

**Derived no effect levels (DNELs)** Not available.

**Predicted no effect concentrations (PNECs)** Not available.

**8.2. Exposure controls**

**Appropriate engineering controls** Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have not been established, maintain airborne levels to an acceptable level.

**Individual protection measures, such as personal protective equipment**

**General information** Use personal protective equipment as required. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Eye/face protection** Wear safety glasses with side shields (or goggles).

**Skin protection**

**- Hand protection** Wear gloves to prevent metal cuts and skin abrasions during handling.

**- Other** Wear suitable protective clothing.

**Respiratory protection** In case of insufficient ventilation, wear suitable respiratory equipment.

**Thermal hazards** Wear appropriate thermal protective clothing, when necessary.

**Hygiene measures** Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants. Contaminated work clothing should not be allowed out of the workplace.

**Environmental exposure controls** Avoid release to the aquatic environment. Inform appropriate managerial or supervisory personnel of all environmental releases.

**SECTION 9: Physical and chemical properties****9.1. Information on basic physical and chemical properties****Appearance**

|                       |           |
|-----------------------|-----------|
| <b>Physical state</b> | Solid.    |
| <b>Form</b>           | Solid.    |
| <b>Colour</b>         | Metallic. |

|   |   |
|---|---|
| <b>Odour</b>  | None.   |
| <b>Odour threshold</b>                              | Not applicable.                               |
| <b>pH</b>   | Not applicable.                               |
| <b>Melting point/freezing point</b>                 | 1455 °C (2651 °F) estimated / Not applicable. |
| <b>Initial boiling point and boiling range</b>      | Not applicable.                               |
| <b>Flash point</b>                                  | Not applicable.                               |
| <b>Evaporation rate</b>                             | Not applicable.                               |
| <b>Flammability (solid, gas)</b>                    | None known.                                   |
| <b>Upper/lower flammability or explosive limits</b> |   |
| <b>Flammability limit - lower (%)</b>               | Not applicable.                               |
| <b>Flammability limit - lower (%) temperature</b>   | Not applicable.                               |
| <b>Flammability limit - upper (%)</b>               | Not applicable.                               |
| <b>Flammability limit - upper (%) temperature</b>   | Not applicable.                               |
| <b>Explosive limit - lower (%)</b>                  | Not applicable.                               |
| <b>Explosive limit - lower (%) temperature</b>      | Not applicable.                               |
| <b>Explosive limit – upper (%)</b>                  | Not applicable.                               |
| <b>Explosive limit - upper (%) temperature</b>      | Not applicable.                               |
| <b>Vapour pressure</b>                              | Not applicable.                               |
| <b>Vapour density</b>                               | Not applicable.                               |
| <b>Relative density</b>                             | Not applicable.                               |
| <b>Solubility(ies)</b>                              |   |
| <b>Solubility (water)</b>                           | Insoluble.                                    |
| <b>Partition coefficient (n-octanol/water)</b>      | Not applicable.<br>Not applicable.            |
| <b>Auto-ignition temperature</b>                    | Not applicable.                               |
| <b>Decomposition temperature</b>                    | Not applicable.                               |
| <b>Viscosity</b>                                    | Not applicable.                               |
| <b>Explosive properties</b>                         | Not explosive.                                |
| <b>Oxidising properties</b>                         | Not oxidising.                                |

## 9.2. Other information

|                |                                  |
|----------------|----------------------------------|
| <b>Density</b> | 8,31 g/cm <sup>3</sup> estimated |
|----------------|----------------------------------|

## SECTION 10: Stability and reactivity

|   |   |
|---|---|
| <b>10.1. Reactivity</b>                         | The product is stable and non-reactive under normal conditions of use, storage and transport. |
| <b>10.2. Chemical stability</b>                 | Material is stable under normal conditions.   |
| <b>10.3. Possibility of hazardous reactions</b> | No dangerous reaction known under conditions of normal use.                                   |
| <b>10.4. Conditions to avoid</b>                | Contact with incompatible materials.  |
| <b>10.5. Incompatible materials</b>             | Strong acids. Strong oxidising agents.  |
| <b>10.6. Hazardous decomposition products</b>   | No hazardous decomposition products are known.  |

## SECTION 11: Toxicological information

|                            |  |
|----------------------------|--|
| <b>General information</b> | Occupational exposure to the substance or mixture may cause adverse effects. |
|----------------------------|--|

### Information on likely routes of exposure

|                     |                                      |
|---------------------|--------------------------------------|
| <b>Inhalation</b>   | Prolonged inhalation may be harmful. |
| <b>Skin contact</b> | May cause an allergic skin reaction. |

|                    |   |
|--------------------|---|
| <b>Eye contact</b> | Not likely, due to the form of the product.   |
| <b>Ingestion</b>   | May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure. |
| <b>Symptoms</b>    | May cause an allergic skin reaction.  |

#### 11.1. Information on toxicological effects

|  |   |
|--|---|
| <b>Acute toxicity</b>                    | Not known.                                    |
| <b>Skin corrosion/irritation</b>         | Not relevant, due to the form of the product. |
| <b>Serious eye damage/eye irritation</b> | Not likely, due to the form of the product.   |
| <b>Respiratory sensitisation</b>         | Not a respiratory sensitizer.                 |
| <b>Skin sensitisation</b>                | May cause an allergic skin reaction.          |
| <b>Germ cell mutagenicity</b>            | Not classified.                               |
| <b>Carcinogenicity</b>                   | Suspected of causing cancer.                  |

#### Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)

Not listed.

#### IARC Monographs. Overall Evaluation of Carcinogenicity

|  |   |
|--|---|
| Chromium (CAS 7440-47-3)                                 | 3 Not classifiable as to carcinogenicity to humans. |
| NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0) | 2B Possibly carcinogenic to humans.                 |

|   |   |
|---|---|
| <b>Reproductive toxicity</b>                              | Due to partial or complete lack of data the classification is not possible. |
| <b>Specific target organ toxicity - single exposure</b>   | Not classified.   |
| <b>Specific target organ toxicity - repeated exposure</b> | Causes damage to organs through prolonged or repeated exposure.             |
| <b>Aspiration hazard</b>                                  | Not an aspiration hazard.   |
| <b>Mixture versus substance information</b>               | Not applicable.   |
| <b>Other information</b>                                  | Not available.  |

## SECTION 12: Ecological information

|  |   |
|--|---|
| <b>12.1. Toxicity</b>                                  | Not relevant, due to the form of the product.   |
| <b>12.2. Persistence and degradability</b>             |   |
| <b>12.3. Bioaccumulative potential</b>                 | Not applicable.   |
| <b>Partition coefficient n-octanol/water (log Kow)</b> | Not applicable.   |
| <b>Bioconcentration factor (BCF)</b>                   | Not available.  |
| <b>12.4. Mobility in soil</b>                          | No data available.  |
| <b>12.5. Results of PBT and vPvB assessment</b>        | Not a PBT or vPvB substance or mixture.   |
| <b>12.6. Other adverse effects</b>                     | No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component. |

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

|                                     |  |
|-------------------------------------|--|
| <b>Residual waste</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>       | Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.       |
| <b>EU waste code</b>                | The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.   |
| <b>Disposal methods/information</b> | Collect and reclaim or dispose in sealed containers at licensed waste disposal site. Dispose of contents/container in accordance with local/regional/national/international regulations.                         |
| <b>Special precautions</b>          | Dispose in accordance with all applicable regulations.   |

## SECTION 14: Transport information

### ADR

14.1. - 14.6.: Not regulated as dangerous goods.

### RID

14.1. - 14.6.: Not regulated as dangerous goods.

### ADN

14.1. - 14.6.: Not regulated as dangerous goods.

### IATA

14.1. - 14.6.: Not regulated as dangerous goods.

### IMDG

14.1. - 14.6.: Not regulated as dangerous goods.

**General information** IMDG Regulated Marine Pollutant.

## SECTION 15: Regulatory information

### 15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**

Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 1 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 2 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex I, Part 3 as amended**

Not listed.

**Regulation (EU) No. 649/2012 concerning the export and import of dangerous chemicals, Annex V as amended**

Not listed.

**Regulation (EC) No. 166/2006 Annex II Pollutant Release and Transfer Registry, as amended**

Chromium (CAS 7440-47-3)

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**

Not listed.

#### Authorisations

**Regulation (EC) No. 1907/2006, REACH Annex XIV Substances subject to authorization, as amended**

Not listed.

#### Restrictions on use

**Regulation (EC) No. 1907/2006, REACH Annex XVII Substances subject to restriction on marketing and use as amended**

NICKEL POWDER; [PARTICLE DIAMETER < 1MM] (CAS 7440-02-0)

**Directive 2004/37/EC: on the protection of workers from the risks related to exposure to carcinogens and mutagens at work, as amended.**

Not listed.

#### Other EU regulations

**Directive 2012/18/EU on major accident hazards involving dangerous substances, as amended**

Not listed.

#### Other regulations

Pregnant women should not work with the product, if there is the least risk of exposure. The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended. Regulation (EU) No 453/2010 amending Regulation (EC) No 1907/2006 on the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH). Regulation (EC) No 1272/2008 on classification, labeling and packaging of substances and mixtures, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

## National regulations

Follow national regulation for work with chemical agents. Young people under 18 years old are not allowed to work with this product according to EU Directive 94/33/EC on the protection of young people at work, as amended.

Chemical Safety at Workplace Ordinance Joint Decree No. 25/2000 (Annex 2): Permissible limit values of biological exposure (effect) indices Decree No. 25/2000. (IX. 30.) EüM-SzCsM of the Minister of Health and the Minister of Social and Family Affairs on chemical safety at work Act No. 93 of 1993 on Labour Safety (1993.évi XCIII.), as amended  
Government Decree No. 220 of 2004 (VII. 21.) providing rules on the protection of surface waters quality  
Government Decree No. 98/2001 (VI. 15.), on the conditions of the activities related to hazardous waste, and Ministry of Environmental Affairs Decree No. 16/2001 (VII. 18.), on the register of wastes  
Public Act No. XXV of 2000 on Chemical Safety, and Application Decree No. 44/2000. (XII.27.) EüM [of the Ministry of Health]

This safety data sheet conforms to the following laws, regulations and standards:

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

**List of abbreviations** Not available.

**References** Not available.

**Information on evaluation method leading to the classification of mixture** Not available.

### Full text of any H-statements not written out in full under Sections 2 to 15

H351 Suspected of causing cancer.

H412 Harmful to aquatic life with long lasting effects.

### Revision information

Product and Company Identification: Product and Company Identification

Physical & Chemical Properties: Multiple Properties

Transport Information: Material Transportation Information

### Training information

Follow training instructions when handling this material.

### Disclaimer

This document has been prepared using data from sources considered to be technically reliable and the information is believed to be correct. Materion makes no warranties, expressed or implied, as to the accuracy of the information contained herein. Materion cannot anticipate all conditions under which this information and its products may be used and the actual conditions of use are beyond its control. The user is responsible to evaluate all available information when using this product for any particular use and to comply with all Federal, State, Provincial and Local laws, statutes and regulations.

To avoid any misunderstandings or incorrect assumptions by the receiver of the safety information, it should be made clear that the supplied information is not in the form of a Safety Data Sheet (SDS), but is actually a voluntary Product Information Sheet closely following the guidelines of the Safety Data Sheet – COMMISSION REGULATION (EU) No 453/2010 of 20 May 2010 (REACH/SDS).