



# 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 Iron Targets  
**Registration number** -  
**Document number** G76  
**Synonyms** None.  
**Issue date** 02-September-2020  
**Version number** 01

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

#### Supplier

**Company name** Materion Advanced Materials Germany GmbH  
**Address** Borsigstrasse 10  
63755 Alzenau  
DE

#### Division

**Telephone** 49.60.23.91.82.0 H. Schmiing

**e-mail** Materion.Germany@materion.com

**Contact person** Hermann Schmiing

**1.4. Emergency telephone number** 49.60.23.91.82.0 H. Schmiing

### 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)

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

The substance 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	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:** Iron, Nickel

#### Hazard pictograms



**Signal word** Danger

#### Hazard statements

H317 May cause an allergic skin reaction.  
H351 Suspected of causing cancer.  
H373 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.  
P308 + P313 If exposed or concerned: Get medical advice/attention.  
P362 + P364 Take off contaminated clothing and wash it 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	45 - 55	7440-02-0 231-111-4	01-2119438727-29-0049	028-002-00-7	
<b>Classification:</b>	Skin Sens. 1;H317, STOT SE 3;H335, Carc. 2;H351, STOT RE 2;H373				7,S
Chromium	40 - 45	7440-47-3 231-157-5	-	-	#
<b>Classification:</b>	Aquatic Chronic 3;H412				
Iron	10 - 15	7439-89-6 231-096-4	-	-	
<b>Classification:</b>	STOT RE 1;H372				

## SECTION 4: First aid measures

**General information** If you feel unwell, seek medical advice (show the label where possible).

### 4.1. Description of first aid measures

**Inhalation** Move to fresh air. Call a physician if symptoms develop or persist.  
**Skin contact** Wash off with soap and water. Get medical attention if irritation develops and persists.  
**Eye contact** Rinse with water. Get medical attention if irritation develops and persists.  
**Ingestion** Rinse mouth. Get medical attention if symptoms occur.

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

May cause an allergic skin reaction.

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

Treat symptomatically.

## SECTION 5: Firefighting measures

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

### 5.1. Extinguishing media

**Suitable extinguishing media** Powder. Dry sand. Water Spray or Fog

**Unsuitable extinguishing media** Carbon dioxide (CO<sub>2</sub>).

**5.2. Special hazards arising from the substance or mixture** No unusual fire or explosion hazards noted.

### 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. 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** Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up** Stop the flow of material, if this is without risk. For waste disposal, see section 13 of the PIS.

**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** Do not handle until all safety precautions have been read and understood. Wear appropriate personal protective equipment. Wash hands thoroughly after handling.

**7.2. Conditions for safe storage, including any incompatibilities** Store locked up. Store away from incompatible materials (see Section 10 of the PIS).

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

## SECTION 8: Exposure controls/personal protection

### 8.1. Control parameters

#### Occupational exposure limits

##### Austria. MAK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

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

##### Austria. TRK List, OEL Ordinance (GwV), BGBl. II, no. 184/2001

Components	Type	Value	Form
Nickel (CAS 7440-02-0)	STEL	2 mg/m <sup>3</sup>	Inhalable dust.
	TWA	0,5 mg/m <sup>3</sup>	Inhalable dust.

##### Belgium. Exposure Limit Values.

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	TWA	1 mg/m <sup>3</sup>

##### Bulgaria. OELs. Regulation No 13 on protection of workers against risks of exposure to chemical agents at work

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>	
Iron (CAS 7439-89-6)	TWA	6 mg/m <sup>3</sup>	Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	0,05 mg/m <sup>3</sup>	

**Croatia. Dangerous Substance Exposure Limit Values in the Workplace (ELVs), Annexes 1 and 2, Narodne Novine, 13/09**

Components	Type	Value
Chromium (CAS 7440-47-3)	MAC	2 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	MAC	0,5 mg/m <sup>3</sup>

**Cyprus. OELs. Control of factory atmosphere and dangerous substances in factories regulation, PI 311/73, as amended.**

Material	Type	Value
Nickel Chromium Iron Targets	TWA	1 mg/m <sup>3</sup>

Components	Type	Value
Nickel (CAS 7440-02-0)	TWA	1 mg/m <sup>3</sup>

**Czech Republic. OELs. Government Decree 361**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	Ceiling	1,5 mg/m <sup>3</sup>	
	TWA	0,5 mg/m <sup>3</sup>	Dust.
		0,5 mg/m <sup>3</sup>	
Iron (CAS 7439-89-6)	TWA	10 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	Ceiling	1 mg/m <sup>3</sup>	
	TWA	0,5 mg/m <sup>3</sup>	

**Denmark. Exposure Limit Values**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TLV	0,5 mg/m <sup>3</sup>	Dust.
Nickel (CAS 7440-02-0)	TLV	0,05 mg/m <sup>3</sup>	Dust.

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances. (Annex of Regulation No. 293 of 18 September 2001)**

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>

**Finland. Workplace Exposure Limits**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	0,01 mg/m <sup>3</sup>	Respirable.

**France. Threshold Limit Values (VLEP) for Occupational Exposure to Chemicals in France, INRS ED 984**

Components	Type	Value
Chromium (CAS 7440-47-3)	VME	2 mg/m <sup>3</sup>
<b>Regulatory status:</b> Regulatory indicative (VRI)		
Nickel (CAS 7440-02-0)	VME	1 mg/m <sup>3</sup>
<b>Regulatory status:</b> Indicative limit (VL)		

**Germany. TRGS 900, Limit Values in the Ambient Air at the Workplace**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	AGW	2 mg/m <sup>3</sup>	Inhalable fraction.
Nickel (CAS 7440-02-0)	AGW	0,006 mg/m <sup>3</sup>	Respirable fraction.

**Greece. OELs (Decree No. 90/1999, as amended)**

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	1 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	TWA	1 mg/m <sup>3</sup>

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

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	Ceiling	0,1 mg/m <sup>3</sup>

**Iceland. OELs. Regulation 154/1999 on occupational exposure limits**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	Dust.
Nickel (CAS 7440-02-0)	TWA	0,05 mg/m <sup>3</sup>	Dust.

**Ireland. Occupational Exposure Limits**

Components	Type	Value	
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>	

**Italy. Occupational Exposure Limits**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	1,5 mg/m <sup>3</sup>	Inhalable fraction.

**Latvia. OELs. Occupational exposure limit values of chemical substances in work environment**

Components	Type	Value	
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	0,05 mg/m <sup>3</sup>	

**Lithuania. OELs. Limit Values for Chemical Substances, General Requirements**

Components	Type	Value	
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>	

**Luxembourg. Binding Occupational exposure limit values (Annex I), Memorial A**

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

**Netherlands. OELs (binding)**

Components	Type	Value	
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	

**Norway. Administrative Norms for Contaminants in the Workplace**

Components	Type	Value	
Chromium (CAS 7440-47-3)	TLV	0,5 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TLV	0,05 mg/m <sup>3</sup>	

**Ordinance of the Minister of Labour and Social Policy on 6 June 2014 on the maximum permissible concentrations and intensities of harmful health factors in the work environment, Journal of Laws 2014, item 817**

Components	Type	Value	
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	0,25 mg/m <sup>3</sup>	

**Portugal. OELs. Decree-Law n. 290/2001 (Journal of the Republic - 1 Series A, n.266)**

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

**Portugal. VLEs. Norm on occupational exposure to chemical agents (NP 1796)**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	1,5 mg/m <sup>3</sup>	Inhalable fraction.

**Romania. OELs. Protection of workers from exposure to chemical agents at the workplace**

Components	Type	Value	
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	STEL	0,5 mg/m <sup>3</sup>	
	TWA	0,1 mg/m <sup>3</sup>	

**Slovakia. OELs for carcinogens and mutagens. Regulation No. 46/2002 on carcinogenic and mutagenic substances**

Components	Type	Value	Form
Nickel (CAS 7440-02-0)	TWA	0,05 mg/m <sup>3</sup>	Inhalable fraction.

**Slovakia. OELs. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

Components	Type	Value
Iron (CAS 7439-89-6)	TWA	6 mg/m <sup>3</sup>

**Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>	Inhalable fraction.

**Spain. Occupational Exposure Limits**

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	2 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	TWA	1 mg/m <sup>3</sup>

**Sweden. OELs. Work Environment Authority (AV), Occupational Exposure Limit Values (AFS 2015:7)**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	Total dust.
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>	Total dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>	Inhalable fraction.
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>	Inhalable fraction.

**UK. EH40 Workplace Exposure Limits (WELs)**

Components	Type	Value
Chromium (CAS 7440-47-3)	TWA	0,5 mg/m <sup>3</sup>
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>

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

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

**Biological limit values**

**Czech Republic. Limit Values for Indicators of Biological Exposure Tests in Urine and Blood, Annex 2, Tables 1 and 2, Government Decree 432/2003 Sb.**

Components	Value	Determinant	Specimen	Sampling Time
Chromium (CAS 7440-47-3)	0,065 µmol/mmol	Total chromium	Creatinine in urine	*
	0,03 mg/g	Total chromium	Creatinine in urine	*
Nickel (CAS 7440-02-0)	0,077 µmol/mmol	Nickel	Creatinine in urine	*
	0,04 mg/g	Nickel	Creatinine in urine	*

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

**Finland. HTP-arvot, App 2., Biological Limit Values, (BRA/BGV), Social Affairs and Ministry of Health**

Components	Value	Determinant	Specimen	Sampling Time
Nickel (CAS 7440-02-0)	0,1 µmol/l	Nickel	Urine	*

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

**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	*

**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
	0,043 µmol/mmol	chromium	Creatinine in urine	*
Nickel (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.

**Spain. Biological Limit Values (VLBs), Occupational Exposure Limits for Chemical Agents, Table 4**

Components	Value	Determinant	Specimen	Sampling Time
Chromium (CAS 7440-47-3)	25 µg/l	Cromo total	Urine	*
	10 µg/l	Cromo total	Urine	*

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

**Switzerland. BAT-Werte (Biological Limit Values in the Workplace as per SUVA)**

Components	Value	Determinant	Specimen	Sampling Time
Nickel (CAS 7440-02-0)	45 µg/l	Nickel	Urine	*

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

**UK. EH40 Biological Monitoring Guidance Values (BMGVs)**

Components	Value	Determinant	Specimen	Sampling Time
Chromium (CAS 7440-47-3)	10 umol/mol	Chromium	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 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** If contact is likely, safety glasses with side shields are recommended.

**Skin protection**

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

**- Other** Use personal protective equipment as required.

**Respiratory protection** In case of inadequate ventilation, use respiratory protection.

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

**Hygiene measures** Observe any medical surveillance requirements. Contaminated work clothing should not be allowed out of the workplace.

**Environmental exposure controls** Good general ventilation 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.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

**Appearance**

**Physical state** Solid.

**Form** Solid.

<b>Colour</b>	Grey.
<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.
<b>Auto-ignition temperature</b>	Not applicable.
<b>Decomposition temperature</b>	Not applicable.
<b>Viscosity</b>	Not applicable.
<b>Explosive properties</b>	None known.
<b>Oxidising properties</b>	Not oxidising.

## 9.2. Other information

**Density** 8,11 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>	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	Strong acids.
<b>10.6. Hazardous decomposition products</b>	No hazardous decomposition products are known.

## SECTION 11: Toxicological information

**General information** Occupational exposure to the substance or mixture may cause adverse effects.

### Information on likely routes of exposure

**Inhalation** 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>	Expected to be a low ingestion hazard.
<b>Symptoms</b>	May cause respiratory irritation. May cause an allergic skin reaction. Dermatitis. Rash.

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	None known.
<b>Skin corrosion/irritation</b>	May cause skin irritation.
<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 (CAS 7440-02-0)	2B Possibly carcinogenic to humans.

#### Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)

Nickel (CAS 7440-02-0)	Carcinogenic, Category 2.
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<b>Reproductive toxicity</b>	Not classified.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	May cause damage to organs through prolonged or repeated exposure.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Mixture versus substance information</b>	No information available.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	Based on available data, the classification criteria are not met for hazardous to the aquatic environment.
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of any ingredients in the mixture.
<b>12.3. Bioaccumulative potential</b>	No data available.
<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.

### 12.7. Additional information

#### Estonia Dangerous substances in groundwater Data

Chromium (CAS 7440-47-3)	Chromium (Cr) 10 ug/l Chromium (Cr) 200 ug/l
Nickel (CAS 7440-02-0)	Nickel (Ni) 10 ug/l Nickel (Ni) 200 ug/l

#### Estonia Dangerous substances in soil Data

Chromium (CAS 7440-47-3)	Chromium (Cr) 100 mg/kg Chromium (Cr) 300 mg/kg Chromium (Cr) 800 mg/kg
Nickel (CAS 7440-02-0)	Nickel (Ni) 150 mg/kg

## 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.

## 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 (EC) No. 850/2004 On persistent organic pollutants, Annex I 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 (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 (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.

**National regulations** Not available.

**15.2. Chemical safety assessment** Not available.

**SECTION 16: Other information**

**List of abbreviations** Not available.

**References** Not available.

**Training information** Follow training instructions when handling this material.

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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).