



# 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 Silicon Product  
**Synonyms** None.  
**Document number** 287  
**Issue date** 02-June-2015  
**Version number** 01

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

**Identified uses** Not available.  
**Uses advised against** None known.

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

#### Supplier

**Company name** Materion Advanced Materials Group  
**Address** 42 Mt. Ebo Road South  
Brewster, NY 10509  
United States  
**Division**  
**Telephone** Supplier Phone 1+845.279.0900  
**e-mail** Not available.  
**Contact person** Not available.

**1.4. Emergency telephone number** Chemtrec 1+703.527.3887

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

#### Classification according to Directive 67/548/EEC or 1999/45/EC as amended

**Classification** F;R11, N;R50/53

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

##### Health hazards

Acute toxicity, oral	Category 4	H302 - Harmful if swallowed.
Acute toxicity, inhalation	Category 4	H332 - Harmful if inhaled.
Skin corrosion/irritation	Category 2	H315 - Causes skin irritation.
Serious eye damage/eye irritation	Category 2	H319 - Causes serious eye irritation.
Carcinogenicity	Category 2	H351 - Suspected of causing cancer.

##### Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1	H400 - Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term aquatic hazard	Category 3	H412 - Harmful to aquatic life with long lasting effects.

#### Hazard summary

**Physical hazards** Highly flammable.  
**Health hazards** Not classified for health hazards.  
**Environmental hazards** Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
**Specific hazards** Not available.  
**Main symptoms** Not available.

### 2.2. Label elements

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

**Contains:** Chromium, Nickel, Silicon

<b>Hazard pictograms</b>	None.
<b>Signal word</b>	Warning
<b>Hazard statements</b>	
H302	Harmful if swallowed.
H315	Causes skin irritation.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H351	Suspected of causing cancer.
H400	Very toxic to aquatic life.
H412	Harmful to aquatic life with long lasting effects.

#### Precautionary statements

##### Prevention

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P261	Avoid breathing dust.
P264	Wash thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear eye protection/face protection.
P280	Wear protective gloves/protective clothing/eye protection/face protection.

##### Response

P301 + P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P302 + P352	IF ON SKIN: Wash with plenty of water.
P304 + P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305 + P351 + P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P308 + P313	IF exposed or concerned: Get medical advice/attention.
P312	Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.
P332 + P313	If skin irritation occurs: Get medical advice/attention.
P337 + P313	If eye irritation persists: Get medical advice/attention.
P362 + P364	Take off contaminated clothing and wash it before reuse.
P391	Collect spillage.

##### Storage

P405	Store locked up.
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##### Disposal

P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
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#### Supplemental label information

100 % of the mixture consists of component(s) of unknown acute oral toxicity. 43,72 % of the mixture consists of component(s) of unknown acute hazards to the aquatic environment. 9,09 % of the mixture consists of component(s) of unknown long-term hazards to the aquatic environment.

#### 2.3. Other hazards

None known.

### SECTION 3: Composition/information on ingredients

#### 3.2. Mixtures

##### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Nickel	40 - < 90	7440-02-0 231-111-4	-	-	M=10
<b>Classification:</b>	<b>DSD:</b> N;R50/53				
	<b>CLP:</b> Carc. 2;H351, Aquatic Acute 1;H400, Aquatic Chronic 3;H412				
Chromium	20 - < 60	7440-47-3 231-157-5	-	-	#
<b>Classification:</b>	<b>DSD:</b> R52/53				
	<b>CLP:</b> Aquatic Chronic 3;H412				

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	INDEX No.	Notes
Silicon	1 - < 20	7440-21-3 231-130-8	-	-	
<b>Classification:</b>	<b>DSD:</b> -				
	<b>CLP:</b> -				

## SECTION 4: First aid measures

**General information** Not available.

### 4.1. Description of first aid measures

**Inhalation** Not available.

**Skin contact** Not available.

**Eye contact** Not available.

**Ingestion** Not available.

**4.2. Most important symptoms and effects, both acute and delayed** Not available.

**4.3. Indication of any immediate medical attention and special treatment needed** Not available.

## SECTION 5: Firefighting measures

**General fire hazards** Not available.

### 5.1. Extinguishing media

**Suitable extinguishing media** DRY sand, sodium chloride powder, graphite powder or Met-L-X powder.

**Unsuitable extinguishing media** Not available.

**5.2. Special hazards arising from the substance or mixture** Not available.

### 5.3. Advice for firefighters

**Special protective equipment for firefighters** Not available.

## SECTION 6: Accidental release measures

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

**For non-emergency personnel** Not available.

**For emergency responders** Not available.

**6.2. Environmental precautions** Not available.

**6.3. Methods and material for containment and cleaning up** Not available.

**6.4. Reference to other sections** Not available.

## SECTION 7: Handling and storage

**7.1. Precautions for safe handling** Not available.

**7.2. Conditions for safe storage, including any incompatibilities** Not available.

**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>
Silicon (CAS 7440-21-3)	TWA	10 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
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>

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

Components	Type	Value	Form
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>	
Silicon (CAS 7440-21-3)	STEL	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total dust.

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

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>	
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.
Silicon (CAS 7440-21-3)	TLV	10 mg/m <sup>3</sup>	

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

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>	
Silicon (CAS 7440-21-3)	TWA	5 mg/m <sup>3</sup>	Respirable dust.
		10 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>

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

Components	Type	Value
Nickel (CAS 7440-02-0)	VME	1 mg/m <sup>3</sup>
Silicon (CAS 7440-21-3)	VME	10 mg/m <sup>3</sup>

**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.

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

Components	Type	Value	Form
Chromium (CAS 7440-47-3)	TWA	1 mg/m <sup>3</sup>	
Nickel (CAS 7440-02-0)	TWA	1 mg/m <sup>3</sup>	
Silicon (CAS 7440-21-3)	TWA	5 mg/m <sup>3</sup>	Respirable.
		10 mg/m <sup>3</sup>	Inhalable

**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.
Silicon (CAS 7440-21-3)	TWA	0,7 mg/m <sup>3</sup>	
		0,5 ppm	

**Ireland. Occupational Exposure Limits**

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>	
Silicon (CAS 7440-21-3)	TWA	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Total inhalable dust.

**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>
Silicon (CAS 7440-21-3)	TLV	10 mg/m <sup>3</sup>

**Poland. MACs. Minister of Labour and Social Policy Regarding Maximum Allowable Concentrations and Intensities in Working Environment**

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	0,05 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. Regulation No. 300/2007 concerning protection of health in work with chemical agents**

Components	Type	Value	Form
Silicon (CAS 7440-21-3)	TWA	4 mg/m <sup>3</sup>	Respirable fraction.
		10 mg/m <sup>3</sup>	Inhalable fraction.

**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. Occupational Exposure Limit Values**

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 dust.
Nickel (CAS 7440-02-0)	TWA	0,5 mg/m <sup>3</sup>	Inhalable dust.
Silicon (CAS 7440-21-3)	TWA	3 mg/m <sup>3</sup>	Respirable dust.

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

Components	Type	Value	Form
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>	
Silicon (CAS 7440-21-3)	TWA	4 mg/m <sup>3</sup>	Respirable dust.
		10 mg/m <sup>3</sup>	Inhalable dust.

**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	*

**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
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 umol/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	*
	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** Not available.

**Derived no-effect level (DNEL)** Not available.

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

**8.2. Exposure controls**

**Appropriate engineering controls** Not available.

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

**Eye/face protection** Not available.

**Skin protection**

- **Hand protection** Not available.

- **Other** Not available.

**Respiratory protection** Not available.

**Thermal hazards** Not available.

**Hygiene measures** Not available.

**Environmental exposure controls** Not available.

## **SECTION 9: Physical and chemical properties**

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

#### **Appearance**

**Physical state** Solid.

**Form** Not available.

**Colour** Not available.

**Odour** Not applicable.

**Odour threshold** Not available.

**pH** Not available.

**Melting point/freezing point** 1410 °C (2570 °F) estimated

**Initial boiling point and boiling range** 2355 °C (4271 °F) estimated

**Flash point** Not available.

**Evaporation rate** Not available.

**Flammability (solid, gas)** Not applicable.

#### **Upper/lower flammability or explosive limits**

**Flammability limit - lower (%)** Not available.

**Flammability limit - upper (%)** Not available.

**Vapour pressure** 0,00001 hPa estimated

**Vapour density** Not available.

**Relative density** Not available.

#### **Solubility(ies)**

**Solubility (water)** Not available.

**Solubility (other)** Not available.

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

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Explosive properties** Not available.

**Oxidizing properties** Not available.

### **9.2. Other information**

**Density** 7,70 g/cm<sup>3</sup> estimated

**Specific gravity** 7,7 estimated

## **SECTION 10: Stability and reactivity**

**10.1. Reactivity** Not available.

**10.2. Chemical stability** Not available.

**10.3. Possibility of hazardous reactions** Not available.

**10.4. Conditions to avoid** Not available.

**10.5. Incompatible materials** Not available.

**10.6. Hazardous decomposition products** Not available.

## **SECTION 11: Toxicological information**

**General information** Not available.

#### **Information on likely routes of exposure**

**Inhalation** Not available.

**Skin contact** Not available.

**Eye contact** Not available.



<b>Ingestion</b>	Not available.
<b>Symptoms</b>	Not available.
<b>11.1. Information on toxicological effects</b>	
<b>Acute toxicity</b>	No data available.
<b>Skin corrosion/irritation</b>	Not available.
<b>Serious eye damage/eye irritation</b>	Not available.
<b>Respiratory sensitisation</b>	Not available.
<b>Skin sensitisation</b>	Not available.
<b>Germ cell mutagenicity</b>	Not available.

#### **Carcinogenicity**

##### **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.

<b>Reproductive toxicity</b>	Not available.
<b>Specific target organ toxicity - single exposure</b>	Not available.
<b>Specific target organ toxicity - repeated exposure</b>	Not available.
<b>Aspiration hazard</b>	Not available.
<b>Mixture versus substance information</b>	Not available.
<b>Other information</b>	Not available.

## **SECTION 12: Ecological information**

### **12.1. Toxicity**

<b>Components</b>	<b>Species</b>	<b>Test results</b>
Chromium (CAS 7440-47-3)		
<b>Aquatic</b>		
Fish	LC50	Carp (Cyprinus carpio) 14,3 mg/l, 96 hours
Nickel (CAS 7440-02-0)		
<b>Aquatic</b>		
Crustacea	EC50	Water flea (Daphnia magna) 1 mg/l, 48 hours
Fish	LC50	Fathead minnow (Pimephales promelas) 2,923 mg/l, 96 hours

**12.2. Persistence and degradability** Not available.

**12.3. Bioaccumulative potential** Not available.

**Partition coefficient n-octanol/water (log Kow)** Not available.

**Bioconcentration factor (BCF)** Not available.

**12.4. Mobility in soil** Not available.

**12.5. Results of PBT and vPvB assessment** Not a PBT or vPvB substance or mixture.

**12.6. Other adverse effects** Not available.

## **SECTION 13: Disposal considerations**

### **13.1. Waste treatment methods**

<b>Residual waste</b>	Not available.
<b>Contaminated packaging</b>	Not available.
<b>EU waste code</b>	Not available.

## **SECTION 14: Transport information**

### **ADR**

<b>14.1. UN number</b>	UN3178
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**14.2. UN proper shipping name** Flammable solid, inorganic, n.o.s. (Silicon)

**14.3. Transport hazard class(es)**

**Class** 4.1  
**Subsidiary risk** -  
**Label(s)** 4.1  
**Hazard No. (ADR)** 40  
**Tunnel restriction code** E

**14.4. Packing group** III

**14.5. Environmental hazards** No.

**14.6. Special precautions for user** Not available.

**RID**

**14.1. UN number** UN3178

**14.2. UN proper shipping name** Flammable solid, inorganic, n.o.s. (Silicon)

**14.3. Transport hazard class(es)**

**Class** 4.1  
**Subsidiary risk** -  
**Label(s)** 4.1

**14.4. Packing group** III

**14.5. Environmental hazards** No.

**14.6. Special precautions for user** Not available.

**ADN**

**14.1. UN number** UN3178

**14.2. UN proper shipping name** Flammable Solid, N.o.s. (Silicon)

**14.3. Transport hazard class(es)**

**Class** 4.1  
**Subsidiary risk** -  
**Label(s)** 4.1

**14.4. Packing group** III

**14.5. Environmental hazards** No.

**14.6. Special precautions for user** Not available.

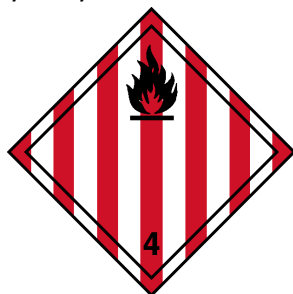
**IATA**

Not regulated as dangerous goods.

**IMDG**

Not regulated as dangerous goods.

**ADN; ADR; RID**



## 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, as amended**

Not listed.

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

Not listed.

**Regulation (EC) No. 850/2004 on persistent organic pollutants, Annex I**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 1**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 2**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex I, part 3**

Not listed.

**Regulation (EC) No. 689/2008 concerning the export and import of dangerous chemicals, Annex V**

Not listed.

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

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.

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

Not listed.

**Restrictions on use**

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

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.

**Directive 92/85/EEC: on the safety and health of pregnant workers and workers who have recently given birth or are breastfeeding, as amended**

Not listed.

**Other EU regulations**

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

Not listed.

**Directive 98/24/EC on the protection of the health and safety of workers from the risks related to chemical agents at work, as amended**

Not listed.

**Directive 94/33/EC on the protection of young people at work, 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.

**Information on evaluation method leading to the classification of mixture**

Not available.

**Full text of any statements or R-phrases and H-statements under Sections 2 to 15**

R11 Highly flammable.  
R50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
R52/53 Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.  
H351 Suspected of causing cancer.  
H400 Very toxic to aquatic life.  
H412 Harmful to aquatic life with long lasting effects.

**Revision information**

None.

**Training information**

Not available.