



# SAFETY DATA 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  
**Synonyms** None.  
**Document number** 1XR  
**Materion Code** 1XR  
**Issue date** 30-June-2015  
**Version number** 03  
**Revision date** 12-January-2018  
**Supersedes date** 06-April-2016

### 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 safety data sheet

#### Supplier

**Company name** Materion Advanced Chemicals Inc.  
**Address** 407 N. 13th Street  
1316 W. St. Paul Avenue  
Milwaukee, WI 53233  
United States  
**Division** Milwaukee  
**Telephone** 414.212.0257  
**e-mail** advancedmaterials@materion.com  
**Contact person** Noreen Atkinson

### 1.4. Emergency telephone number

## 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

This mixture does not meet the criteria for classification according to Regulation (EC) 1272/2008 as amended.

#### Health hazards

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 1 H410 - Very toxic to aquatic life with long lasting effects.

**Hazard summary** WARNING

Harmful if inhaled. Harmful if absorbed through skin. Harmful if swallowed. Harmful in contact with eyes. Cancer hazard. Irritating to eyes and skin. Irritating to respiratory system. Irritating to skin. May cause sensitisation by inhalation. Prolonged exposure may cause chronic effects. Dangerous for the environment if discharged into watercourses. Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

### 2.2. Label elements

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

**Contains:** Nickel

## Hazard pictograms



## Signal word

Warning

## Hazard statements

H351  
H400  
H410

The mixture does not meet the criteria for classification.  
Suspected of causing cancer.  
Very toxic to aquatic life.  
Very toxic to aquatic life with long lasting effects.

## Precautionary statements

### Prevention

P201  
P202  
P273  
P280

Observe good industrial hygiene practices.  
Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.

### Response

P308 + P313  
P391

Wash hands after handling.  
IF exposed or concerned: Get medical advice/attention.  
Collect spillage.

### Storage

P405

Store away from incompatible materials.  
Store locked up.

### Disposal

P501

Dispose of waste and residues in accordance with local authority requirements.  
Dispose of contents/container in accordance with local/regional/national/international regulations.

## Supplemental label information

None.

## 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	0 - 80	7440-02-0 231-111-4	-	-	M=10
<b>Classification:</b>	Carc. 2;H351, Aquatic Acute 1;H400, Aquatic Chronic 3;H412				
Chromium	0 - 20	7440-47-3 231-157-5	-	-	# M=100
<b>Classification:</b>	Aquatic Acute 1;H400, Aquatic Chronic 1;H410				

#### List of abbreviations and symbols that may be used above

CLP: Regulation No. 1272/2008.

DSD: Directive 67/548/EEC.

M: M-factor

vPvB: very persistent and very bioaccumulative substance.

PBT: persistent, bioaccumulative and toxic substance.

#: This substance has been assigned Community workplace exposure limit(s).

#### Composition comments

The full text for all R- and H-phrases is displayed in section 16.

## SECTION 4: First aid measures

#### General information

Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

#### 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

Direct contact with eyes may cause temporary irritation.

#### 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

Dry sand.

##### Unsuitable extinguishing media

Do not use water jet as an extinguisher, as this will spread the fire. Carbon dioxide (CO<sub>2</sub>).

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

During fire, gases hazardous to health may be formed.

#### 5.3. Advice for firefighters

##### Special protective equipment for firefighters

Self-contained breathing apparatus and full protective clothing must be worn in case of fire.

##### 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. For personal protection, see section 8 of the SDS.

##### For emergency responders

Keep unnecessary personnel away. Use personal protection recommended in Section 8 of the SDS.

#### 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. Following product recovery, flush area with water.

#### 6.4. Reference to other sections

For personal protection, see section 8 of the SDS. For waste disposal, see section 13 of the SDS.

### SECTION 7: Handling and storage

#### 7.1. Precautions for safe handling

Avoid prolonged exposure. Observe good industrial hygiene practices.

#### 7.2. Conditions for safe storage, including any incompatibilities

Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

#### 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
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
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.**

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>	Dust.
	TWA	0,5 mg/m <sup>3</sup>	
		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.

**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>	Respirable.
Nickel (CAS 7440-02-0)	TWA	0,01 mg/m <sup>3</sup>	

**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>
Nickel (CAS 7440-02-0)	VME	1 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
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>

**Ireland. Occupational Exposure Limits**

Components	Type	Value
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>

**Poland. MACs. Regulation regarding maximum permissible concentrations and intensities of harmful factors in the work environment, Annex 1**

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>

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

**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	*
	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 µmol/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 (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** 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 appropriate chemical resistant gloves. Suitable gloves can be recommended by the glove supplier.

**- 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** 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.

**Environmental exposure controls** Environmental manager must be informed of all major releases.

## SECTION 9: Physical and chemical properties

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

#### Appearance

**Physical state** Solid.

**Form** Solid.

**Colour** Not available.

**Odour** Not available.

**Odour threshold** Not available.

**pH** Not available.

**Melting point/freezing point** 1455 °C (2651 °F) estimated

**Initial boiling point and boiling range** 2642 °C (4787,6 °F) estimated

**Flash point** Not available.

**Evaporation rate** Not available.

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

#### 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.

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

**Auto-ignition temperature** Not available.

**Decomposition temperature** Not available.

**Viscosity** Not available.

**Explosive properties** Not explosive.

**Oxidising properties** Not oxidising.

## 9.2. Other information

Density	8,55 g/cm <sup>3</sup> estimated
Specific gravity	8,55 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.
<b>Information on likely routes of exposure</b>	
<b>Inhalation</b>	Prolonged inhalation may be harmful.
<b>Skin contact</b>	No adverse effects due to skin contact are expected.
<b>Eye contact</b>	Direct contact with eyes may cause temporary irritation.
<b>Ingestion</b>	May cause discomfort if swallowed. However, ingestion is not likely to be a primary route of occupational exposure.
<b>Symptoms</b>	Exposure may cause temporary irritation, redness, or discomfort.
<b>11.1. Information on toxicological effects</b>	
<b>Acute toxicity</b>	No data available.
<b>Skin corrosion/irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Serious eye damage/eye irritation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Respiratory sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Skin sensitisation</b>	Due to partial or complete lack of data the classification is not possible.
<b>Germ cell mutagenicity</b>	Due to partial or complete lack of data the classification is not possible.
<b>Carcinogenicity</b>	Risk of cancer cannot be excluded with prolonged exposure.
<b>Hungary. 26/2000 EüM Ordinance on protection against and preventing risk relating to exposure to carcinogens at work (as amended)</b>	
	Not listed.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Chromium (CAS 7440-47-3)	3 Not classifiable as to carcinogenicity to humans.
Nickel (CAS 7440-02-0)	2B Possibly carcinogenic to humans.
<b>Slovenia. OELs. Regulations concerning protection of workers against risks due to exposure to chemicals while working (Official Gazette of the Republic of Slovenia)</b>	
Nickel (CAS 7440-02-0)	Carcinogenic, Category 2.
<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>	Due to partial or complete lack of data the classification is not possible.
<b>Specific target organ toxicity - repeated exposure</b>	Due to partial or complete lack of data the classification is not possible.
<b>Aspiration hazard</b>	Due to partial or complete lack of data the classification is not possible.
<b>Mixture versus substance information</b>	No information available.
<b>Other information</b>	Not available.

## SECTION 12: Ecological information

<b>12.1. Toxicity</b>	The product is not classified as environmentally hazardous. However, this does not exclude the possibility that large or frequent spills can have a harmful or damaging effect on the environment.
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Components	Species	Test results
Chromium (CAS 7440-47-3)		
<b>Aquatic</b>		
Crustacea	EC50 Water flea (Daphnia magna)	0,01 - 0,7 mg/l, 48 hours



Components	Species	Test results
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

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

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

**12.3. Bioaccumulative potential** No data available.

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

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

**12.4. Mobility in soil** No data available.

**12.5. Results of PBT and vPvB assessment** Not available.

**12.6. Other adverse effects** 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 Nickel (Ni) 50 mg/kg Nickel (Ni) 500 mg/kg

## SECTION 13: Disposal considerations

### 13.1. Waste treatment methods

**Residual waste** 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).

**Contaminated packaging** 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.

**EU waste code** The Waste code should be assigned in discussion between the user, the producer and the waste disposal company.

**Disposal methods/information** Collect and reclaim or dispose in sealed containers at licensed waste disposal site.

**Special precautions** Dispose in accordance with all applicable regulations.

## SECTION 14: Transport information

### ADR

<b>14.1. UN number</b>	UN3077
<b>14.2. UN proper shipping name</b>	Environmentally hazardous substance, solid, n.o.s.
<b>14.3. Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Hazard No. (ADR)</b>	90
<b>Tunnel restriction code</b>	E

**14.4. Packing group** III  
**14.5. Environmental hazards** Yes  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### RID

**14.1. UN number** UN3077  
**14.2. UN proper shipping name** Environmentally hazardous substance, solid, n.o.s.  
**14.3. Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Label(s)** 9  
**14.4. Packing group** III  
**14.5. Environmental hazards** Yes  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### ADN

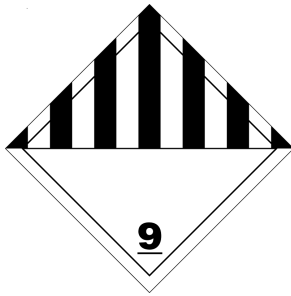
**14.1. UN number** UN3077  
**14.2. UN proper shipping name** Environmentally Hazardous Solid, N.o.s.  
**14.3. Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Label(s)** 9  
**14.4. Packing group** III  
**14.5. Environmental hazards** Yes  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### IATA

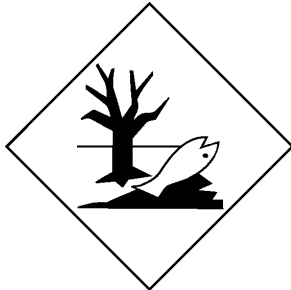
**14.1. UN number** UN3077  
**14.2. UN proper shipping name** Environmentally hazardous substance, solid, n.o.s.  
**14.3. Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**14.4. Packing group** III  
**14.5. Environmental hazards** Yes  
**ERG Code** 9L  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.  
**Other information**  
**Passenger and cargo aircraft** Allowed with restrictions.  
**Cargo aircraft only** Allowed with restrictions.

#### IMDG

**14.1. UN number** UN3077  
**14.2. UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S., MARINE POLLUTANT  
**14.3. Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**14.4. Packing group** III  
**14.5. Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-A, S-F  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.



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 (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**  
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.

#### Other regulations

The product is classified and labelled in accordance with EC directives or respective national laws. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006.

#### National regulations

Follow national regulation for work with chemical agents.

**15.2. Chemical safety assessment**

No Chemical Safety Assessment has been carried out.

**SECTION 16: Other information**

**List of abbreviations**

Not available.

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

The classification for health and environmental hazards is derived by a combination of calculator methods and test data, if available.

**Disclaimer**

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