



# 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** Pb(1.2)Zr(0.52)Ti(0.48)O(3.2)  
**Synonyms** None.  
**Document number** 1QC  
**Materion Code** 1QC  
**Issue date** 19-April-2016  
**Version number** 03  
**Revision date** 11-January-2018  
**Supersedes date** 12-July-2017

### 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  
Reproductive toxicity (fertility, the unborn child) Category 1A  
Reproductive toxicity Effects on or via lactation

#### Hazard summary

DANGER

Risk of serious damage to eyes. Prolonged exposure may cause chronic effects. Causes fire through friction or through retained heat from manufacturing or processing. Not classified for health hazards. However, occupational exposure to the mixture or substance(s) may cause adverse health effects. Harmful by inhalation and if swallowed. Irritating to respiratory system and skin. Harmful in contact with eyes. Cancer hazard. Irritating to respiratory system. Irritating to eyes and skin. Pregnant women or women of child-bearing age should not be exposed to this product. May cause harm to the unborn child. Can cause adverse reproductive effects - such as birth defects, miscarriages, or infertility. Danger of cumulative effects. Possible risk of impaired fertility.

### 2.2. Label elements

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

**Contains:** Lead

## Hazard pictograms



### Signal word

Danger

### Hazard statements

The mixture does not meet the criteria for classification.

### Precautionary statements

#### Prevention

Observe good industrial hygiene practices.

#### Response

Wash hands after handling.

#### Storage

Store away from incompatible materials.

#### Disposal

Dispose of waste and residues in accordance with local authority requirements.

### Supplemental label information

For further information, please contact the Product Stewardship Department at +1.800.862.4118.

### 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
Lead		7439-92-1 231-100-4	-	082-014-00-7	#
<b>Classification:</b>	Acute Tox. 4;H302, Acute Tox. 4;H332, Carc. 2;H351, Repr. 1A;H360FD, STOT RE 2;H373				
Other components below reportable levels	40				

#### 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 H-statements 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

Abdominal pain.

#### 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 powder. Dry sand.

##### 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

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** Use water spray to cool unopened containers.

**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	Form
Lead (CAS 7439-92-1)	MAK	0,1 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	0,4 mg/m <sup>3</sup>	Inhalable fraction.
Zirconium (CAS 7440-67-7)	MAK	5 mg/m <sup>3</sup>	Inhalable fraction.

##### Belgium. Exposure Limit Values.

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>	Dust and fume.
Zirconium (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>	
	TWA	5 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
Lead (CAS 7439-92-1)	TWA	0,05 mg/m <sup>3</sup>
Titanium (CAS 7440-32-6)	TWA	1 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
Lead (CAS 7439-92-1)	MAC	0,15 mg/m <sup>3</sup>
Zirconium (CAS 7440-67-7)	MAC	5 mg/m <sup>3</sup>
	STEL	10 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
Zirconium (CAS 7440-67-7)	TWA	5 mg/m <sup>3</sup>

##### Czech Republic. OELs. Government Decree 361

Components	Type	Value
Lead (CAS 7439-92-1)	Ceiling	0,2 mg/m <sup>3</sup>
	TWA	0,05 mg/m <sup>3</sup>

**Denmark. Exposure Limit Values Components**

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TLV	0,05 mg/m <sup>3</sup>	Dust and fume.

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

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0,1 mg/m <sup>3</sup>	Total dust.
		0,05 mg/m <sup>3</sup>	Respirable dust.

**Finland. Workplace Exposure Limits Components**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,1 mg/m <sup>3</sup>
Zirconium (CAS 7440-67-7)	TWA	1 mg/m <sup>3</sup>

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

Components	Type	Value
Lead (CAS 7439-92-1)	VME	0,1 mg/m <sup>3</sup>

**Germany. DFG MAK List (advisory OELs). Commission for the Investigation of Health Hazards of Chemical Compounds in the Work Area (DFG) Components**

Components	Type	Value	Form
Zirconium (CAS 7440-67-7)	TWA	1 mg/m <sup>3</sup>	Inhalable fraction.

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

Components	Type	Value	Form
Zirconium (CAS 7440-67-7)	AGW	1 mg/m <sup>3</sup>	Inhalable fraction.

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

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>
Zirconium (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>
	TWA	5 mg/m <sup>3</sup>

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

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>
Zirconium (CAS 7440-67-7)	STEL	20 mg/m <sup>3</sup>
	TWA	5 mg/m <sup>3</sup>

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

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0,05 mg/m <sup>3</sup>	Dust and fume.
Zirconium (CAS 7440-67-7)	TWA	5 mg/m <sup>3</sup>	

**Ireland. Occupational Exposure Limits Components**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>

**Italy. Occupational Exposure Limits Components**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>
Zirconium (CAS 7440-67-7)	STEL	10 mg/m <sup>3</sup>
	TWA	5 mg/m <sup>3</sup>

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

Components	Type	Value
Lead (CAS 7439-92-1)	STEL	0,01 mg/m <sup>3</sup>
	TWA	0,005 mg/m <sup>3</sup>
	TWA	10 mg/m <sup>3</sup>
Titanium (CAS 7440-32-6)	TWA	10 mg/m <sup>3</sup>

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

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>	Inhalable fraction.
		0,07 mg/m <sup>3</sup>	Respirable fraction.
Zirconium (CAS 7440-67-7)	TWA	6 mg/m <sup>3</sup>	

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

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m3

**Malta. OELs. Occupational Exposure Limit Values (L.N. 227. of Occupational Health and Safety Authority Act (CAP. 424), Schedules I and V)**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m3

**Netherlands. OELs (binding)**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m3

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

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TLV	0,05 mg/m3	Dust and fume.

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

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,05 mg/m3
Titanium (CAS 7440-32-6)	STEL	30 mg/m3
	TWA	10 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

Lead (CAS 7439-92-1)	TWA	0,05 mg/m3
Titanium (CAS 7440-32-6)	STEL	30 mg/m3
	TWA	10 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

**Portugal. Decree-Law No. 24/2012, Binding Occupational Exposure Limit Values, Annex I (Diário da República - I.a série - No. 26)**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m3

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

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,05 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

Lead (CAS 7439-92-1)	TWA	0,05 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

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

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m3
Titanium (CAS 7440-32-6)	STEL	15 mg/m3
	TWA	10 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

Lead (CAS 7439-92-1)	TWA	0,15 mg/m3
Titanium (CAS 7440-32-6)	STEL	15 mg/m3
	TWA	10 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

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

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0,5 mg/m3	Inhalable fraction.
		0,15 mg/m3	Respirable fraction.
Zirconium (CAS 7440-67-7)	TWA	1 mg/m3	

Lead (CAS 7439-92-1)	TWA	0,5 mg/m3	Inhalable fraction.
		0,15 mg/m3	Respirable fraction.
Zirconium (CAS 7440-67-7)	TWA	1 mg/m3	

**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
Lead (CAS 7439-92-1)	TWA	0,1 mg/m3	Inhalable fraction.
Zirconium (CAS 7440-67-7)	TWA	1 mg/m3	Inhalable dust.

Lead (CAS 7439-92-1)	TWA	0,1 mg/m3	Inhalable fraction.
Zirconium (CAS 7440-67-7)	TWA	1 mg/m3	Inhalable dust.

**Spain. Occupational Exposure Limits**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

Lead (CAS 7439-92-1)	TWA	0,15 mg/m3
Zirconium (CAS 7440-67-7)	STEL	10 mg/m3
	TWA	5 mg/m3

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

Components	Type	Value	Form
Lead (CAS 7439-92-1)	TWA	0,1 mg/m3	Inhalable dust.
		0,05 mg/m3	Respirable dust.

Lead (CAS 7439-92-1)	TWA	0,1 mg/m3	Inhalable dust.
		0,05 mg/m3	Respirable dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Components	Type	Value	Form
Lead (CAS 7439-92-1)	STEL	0,8 mg/m <sup>3</sup>	Inhalable dust.
	TWA	0,1 mg/m <sup>3</sup>	Inhalable dust.

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

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>

**EU. Directive 98/24/EC: on the protection of workers from the risks related to chemical agents at work, Annex I List of Binding Occupational Exposure Limit Values**

Components	Type	Value
Lead (CAS 7439-92-1)	TWA	0,15 mg/m <sup>3</sup>

**Biological limit values****Croatia. BLV. Dangerous Substance Exposure Limit Values at Workplace, Annexes 4 (as amended)**

Components	Value	Determinant	Specimen	Sampling time
Lead (CAS 7439-92-1)	80 µg/g	Lead	Creatinine in urine	*
	1,5 mg/l	Protoporphyrin	Red blood cells (erythrocytes)	*
	0,7 mg/l	Lead	Blood	*
	15 u/l	Dehydratase δ-aminolevulinic acid	Blood	*
	2,67 umol/l	Protoporphyrin	Red blood cells (erythrocytes)	*
	43,68 umol/mol	Lead	Creatinine in urine	*

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

**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
Lead (CAS 7439-92-1)	0,035 µmol/mmol	Coproporphyrin	Creatinine in urine	*
	0,2 mg/g	Coproporphyrin	Creatinine in urine	*
	0,4 mg/l	Lead	Blood	*

\* - 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
Lead (CAS 7439-92-1)	1,4 umol/l	Lead	Blood	*

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

**Germany. TRGS 903, BAT List (Biological Limit Values)**

Components	Value	Determinant	Specimen	Sampling time
Lead (CAS 7439-92-1)	300 µg/l	Blei	Blood	*

\* - 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
Lead (CAS 7439-92-1)	300 µg/l	lead	Blood	*
	1,5 µmol/l	lead	Blood	*
	100 µmol/mol hb	zinc protoporphyrin (for pre-screening)	Hemoglobin in blood	

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

**Luxembourg. Biological limit values (Annex II), Memorial A, n. 96, p. 1948**

Components	Value	Determinant	Specimen
Lead (CAS 7439-92-1)	70 ug/ml	Pb	Blood

**Portugal. Decree-Law No. 24/2012, Binding Biological Limit Values, Annex II (Diário da República - I.a série - No. 26)**

Components	Value	Determinant	Specimen
Lead (CAS 7439-92-1)	70 µg/100 ml	Chumbo	Blood

**Slovakia. BLVs (Biological Limit Value). Regulation no. 355/2006 concerning protection of workers exposed to chemical agents, Annex 2**

Components	Value	Determinant	Specimen	Sampling time
Lead (CAS 7439-92-1)	100 µg/l	Lead	Blood	*
	4,03 mg/g	δ-Aminolevulinic acid	Creatinine in urine	
	0,2 mg/g	Coproporphyrin	Creatinine in urine	*
	6 mg/l	δ-Aminolevulinic acid		
	0,3 mg/l	Coproporphyrin	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
Lead (CAS 7439-92-1)	70 µg/dl	Plomo	Blood	*

\* - 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
Lead (CAS 7439-92-1)	100 µg/l	Blei (Frauen < 45 Jahre)	Blood	*

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

**EU. Directive 98/24/EC: on the protection of workers from the risks related to chemical agents at work, Annex II Binding Biological Limit Values and Health Surveillance Measures**

Components	Value	Determinant	Specimen
Lead (CAS 7439-92-1)	70 µg/100 ml	Lead	Blood

**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

<b>Physical state</b>	Solid.
<b>Form</b>	Solid.
<b>Colour</b>	Not available.
<b>Odour</b>	Not available.
<b>Odour threshold</b>	Not available.
<b>pH</b>	Not available.
<b>Melting point/freezing point</b>	-218,4 °C (-361,12 °F) estimated
<b>Initial boiling point and boiling range</b>	-182,96 °C (-297,33 °F) estimated
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.
<b>Flammability (solid, gas)</b>	Not available.
<b>Upper/lower flammability or explosive limits</b>	
<b>Flammability limit - lower (%)</b>	Not available.
<b>Flammability limit - upper (%)</b>	Not available.
<b>Vapour pressure</b>	11484738 hPa estimated
<b>Vapour density</b>	Not available.
<b>Relative density</b>	Not available.
<b>Solubility(ies)</b>	
<b>Solubility (water)</b>	Not available.
<b>Partition coefficient (n-octanol/water)</b>	Not available.
<b>Auto-ignition temperature</b>	200 °C (392 °F) estimated
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not oxidising.

### 9.2. Other information

<b>Density</b>	8,41 g/cm <sup>3</sup> estimated
<b>Specific gravity</b>	8,41 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>	Acids. Strong oxidising agents.
<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

<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>	Abdominal pain.
<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.

**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**

Lead (CAS 7439-92-1) 2B Possibly carcinogenic to humans.

**Reproductive toxicity** Due to partial or complete lack of data the classification is not possible.

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

Lead (CAS 7439-92-1) Toxic for reproduction - category 2.

**Specific target organ toxicity - single exposure** Due to partial or complete lack of data the classification is not possible.

**Specific target organ toxicity - repeated exposure** Due to partial or complete lack of data the classification is not possible.

**Aspiration hazard** Due to partial or complete lack of data the classification is not possible.

**Mixture versus substance information** No information available.

**Other information** Not available.

## SECTION 12: Ecological information

**12.1. Toxicity** 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.

**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**

Lead (CAS 7439-92-1) LEAD (PB) 10 UG/L  
LEAD (PB) 200 UG/L

**Estonia Dangerous substances in soil Data**

Lead (CAS 7439-92-1) LEAD (PB) 300 mg/kg  
LEAD (PB) 50 mg/kg  
LEAD (PB) 600 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).

<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.
<b>Special precautions</b>	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 substances, 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>	Not available.
<b>Tunnel restriction code</b>	Not available.
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### RID

<b>14.1. UN number</b>	UN3077
<b>14.2. UN proper shipping name</b>	Environmentally hazardous substances, 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>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

### ADN

<b>14.1. UN number</b>	UN3077
<b>14.2. UN proper shipping name</b>	Environmentally hazardous substances, 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>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

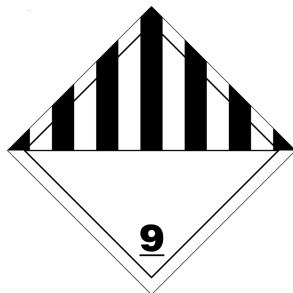
### IATA

<b>14.1. UN number</b>	UN3077
<b>14.2. UN proper shipping name</b>	Environmentally hazardous substances, 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>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	No.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

## IMDG

<b>14.1. UN number</b>	UN3077
<b>14.2. UN proper shipping name</b>	Environmentally hazardous substances, solid, n.o.s.
<b>14.3. Transport hazard class(es)</b>	
Class	9
Subsidiary risk	-
Label(s)	9
<b>14.4. Packing group</b>	III
<b>14.5. Environmental hazards</b>	
Marine pollutant	No.
<b>EmS</b>	Not available.
<b>14.6. Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.

ADN; ADR; IATA; IMDG; 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 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**  
Lead (CAS 7439-92-1)

**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**  
Lead (CAS 7439-92-1)

**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. Pregnant women should not work with the product, if there is the least risk of exposure. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

**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.

**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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