



# SAFETY DATA SHEET

**MATERION**

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

### 1.1. Product identifier

<b>Name of the substance</b>	Lead oxide (Pb3O4)
<b>Identification number</b>	082-001-00-6 (Index number)
<b>Registration number</b>	-
<b>Document number</b>	2QE
<b>Synonyms</b>	Lead Tetroxide
<b>Materion Code</b>	2QE
<b>Issue date</b>	07-December-2017
<b>Version number</b>	02
<b>Revision date</b>	21-April-2022

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

#### Supplier

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

### 1.4. Emergency telephone number

**Supersedes date** 07-December-2017

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

<b>Identified uses</b>	Not available.
<b>Uses advised against</b>	None known.

## SECTION 2: Hazards identification

### 2.1. Classification of the substance or mixture

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

##### Health hazards

Acute toxicity, oral	Category 4
Acute toxicity, inhalation	Category 4
Carcinogenicity	Category 1B
Reproductive toxicity (fertility, the unborn child)	Category 1A
Specific target organ toxicity - repeated exposure	Category 2

H360 - May damage fertility or the unborn child.

##### Environmental hazards

Hazardous to the aquatic environment, acute aquatic hazard	Category 1
Hazardous to the aquatic environment, long-term aquatic hazard	Category 1

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

**Hazard summary** May damage fertility or the unborn child. Suspected of damaging fertility or the unborn child.

### 2.2. Label elements

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

**Contains:** lead compounds with the exception of those specified elsewhere in this Annex

## Hazard pictograms



## Signal word

Danger

## Hazard statements

H410  
H360

Very toxic to aquatic life with long lasting effects.  
May damage fertility or the unborn child.

## Precautionary statements

### Prevention

P201  
P202  
P264  
P271  
P273

Obtain special instructions before use.  
Do not handle until all safety precautions have been read and understood.  
Wash thoroughly after handling.  
Use only outdoors or in a well-ventilated area.  
Avoid release to the environment.

### Response

P330  
P304 + P340  
P312  
P308 + P313  
P391

Rinse mouth.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a poison centre/doctor if you feel unwell.  
IF exposed or concerned: Get medical advice/attention.  
Collect spillage.

### Storage

P405

Store locked up.

### Disposal

P501

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

### 3.1. Substances

#### General information

Chemical name	%	CAS-No. / EC No.	REACH Registration No.	Index No.	Notes
lead compounds with the exception of those specified elsewhere in this Annex	100	1314-41-6 215-235-6	-	082-001-00-6	#
<b>Classification:</b> Repr. 1A;H360, Aquatic Chronic 1;H410					1,A

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

DSD: Directive 67/548/EEC.

CLP: Regulation No. 1272/2008.

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

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

M: M-factor

PBT: persistent, bioaccumulative and toxic substance.

vPvB: very persistent and very bioaccumulative substance.

All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume.

#### Composition comments

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

## SECTION 4: First aid measures

### General information

IF exposed or concerned: Get medical advice/attention. Show this safety data sheet to the doctor in attendance.

### 4.1. Description of first aid measures

#### Inhalation

Remove victim to fresh air and keep at rest in a position comfortable for breathing. If breathing stops, provide artificial respiration. Call a POISON CENTRE or doctor/physician if you feel unwell.

#### Skin contact

Wash off with soap and plenty of water.

#### Eye contact

Not available.

#### Ingestion

Never give anything by mouth to an unconscious person. Rinse mouth.

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

Dusts may irritate the respiratory tract, skin and eyes. Prolonged exposure may cause chronic effects.

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

Provide general supportive measures and treat symptomatically.

**SECTION 5: Firefighting measures**

**General fire hazards**

No unusual fire or explosion hazards noted.

**5.1. Extinguishing media**

**Suitable extinguishing media**

Water spray. Water fog. Foam. Dry chemical powder. Carbon dioxide (CO<sub>2</sub>).

**Unsuitable extinguishing media**

None known.

**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**

Wear suitable protective equipment.

**Special firefighting procedures**

Use water spray to cool unopened containers. Water runoff can cause environmental damage.

**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. Keep people away from and upwind of spill/leak. Wear appropriate personal protective equipment. Do not breathe dust. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. 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 release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Do not contaminate water. Avoid discharge into drains, water courses or onto the ground.

**6.3. Methods and material for containment and cleaning up**

Avoid dispersal of dust in the air (i.e., clearing dust surfaces with compressed air). Collect spillage. Collect dust using a vacuum cleaner equipped with HEPA filter. Prevent entry into waterways, sewer, basements or confined areas. Stop the flow of material, if this is without risk.

Large Spills: Wet down with water and dike for later disposal. Shovel the material into waste container. Following product recovery, flush area with water.

Small Spills: Sweep up or vacuum up spillage and collect in suitable container for disposal. Clean surface thoroughly to remove residual contamination.

Never return spills to original containers for re-use. Put material in suitable, covered, labeled containers.

**6.4. Reference to other sections**

For personal protection, see section 8. For waste disposal, see section 13.

**SECTION 7: Handling and storage**

**7.1. Precautions for safe handling**

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid contact with eyes and prolonged skin contact. Minimise dust generation and accumulation. Use only outdoors or in a well-ventilated area. Avoid release to the environment.

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

Store locked up. Store in a cool, dry place out of direct sunlight. Store in tightly closed container. Store in a well-ventilated place. 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**

<b>Material</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	MAK	0,1 mg/m <sup>3</sup>	Inhalable fraction.
	STEL	0,4 mg/m <sup>3</sup>	Inhalable fraction.

**Belgium. Exposure Limit Values**

<b>Material</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>	Dust and fume.

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

<b>Material</b>	<b>Type</b>	<b>Value</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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**

<b>Material</b>	<b>Type</b>	<b>Value</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	MAC	0,15 mg/m <sup>3</sup>

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

<b>Material</b>	<b>Type</b>	<b>Value</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	Ceiling	0,2 mg/m <sup>3</sup>
	TWA	0,05 mg/m <sup>3</sup>

**Denmark. Exposure Limit Values**

<b>Material</b>	<b>Type</b>	<b>Value</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TLV	0,05 mg/m <sup>3</sup>

**Estonia. OELs. Occupational Exposure Limits of Hazardous Substances (Regulation No. 105/2001, Annex), as amended**

<b>Material</b>	<b>Type</b>	<b>Value</b>	<b>Form</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,1 mg/m <sup>3</sup>	Total dust, respiratory fraction
		0,05 mg/m <sup>3</sup>	Fine dust, respiratory fraction

**Finland. Workplace Exposure Limits**

<b>Material</b>	<b>Type</b>	<b>Value</b>
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,1 mg/m <sup>3</sup>

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	VME	0,1 mg/m <sup>3</sup>

**Regulatory status:** Regulatory binding (VRC)

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,05 mg/m <sup>3</sup>	Dust and fume.

**Ireland. Occupational Exposure Limits**

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

**Italy. Occupational Exposure Limits**

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>	Inhalable fraction.
		0,07 mg/m <sup>3</sup>	Respirable fraction.

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

**Netherlands. OELs (binding)**

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TLV	0,05 mg/m <sup>3</sup>	Dust and fume.

**Poland. 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**

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,05 mg/m <sup>3</sup>	Inhalable fraction.

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,05 mg/m <sup>3</sup>

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,5 mg/m <sup>3</sup>	Inhalable fraction.
		0,15 mg/m <sup>3</sup>	Respirable fraction.

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

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,1 mg/m <sup>3</sup>	Inhalable fraction.

**Spain. Occupational Exposure Limits**

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,1 mg/m <sup>3</sup>	Inhalable dust.
		0,05 mg/m <sup>3</sup>	Respirable dust.

**Switzerland. SUVA Grenzwerte am Arbeitsplatz**

Material	Type	Value	Form
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	STEL	0,8 mg/m <sup>3</sup>	Inhalable fraction.
	TWA	0,1 mg/m <sup>3</sup>	Inhalable fraction.

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

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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**

Material	Type	Value
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	TWA	0,15 mg/m <sup>3</sup>

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

Material	Value	Determinant	Specimen	Sampling Time
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	300 µg/l	Lead	Blood	*
	1,5 mg/l	Protoporphyrin	Blood	*
	15 u/l	Dehydratase δ-aminolevulini c acid	Blood	*
	400 ug/l	Lead	Blood	*
	2,67 umol/l	Protoporphyrin	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**

Material	Value	Determinant	Specimen	Sampling Time
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	1,4 umol/l	Lead	Blood	*

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

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

Material	Value	Determinant	Specimen	Sampling Time
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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**

Material	Value	Determinant	Specimen	Sampling Time
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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**

Material	Value	Determinant	Specimen
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	70 µg/ml	Pb	Blood

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

Material	Value	Determinant	Specimen
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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**

Material	Value	Determinant	Specimen	Sampling Time
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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**

Material	Value	Determinant	Specimen	Sampling Time
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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)**

Material	Value	Determinant	Specimen	Sampling Time
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	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**

Material	Value	Determinant	
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)	70 µg pb/100		
	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 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. If engineering measures are not sufficient to maintain concentrations of dust particulates below the OEL (occupational exposure limit), suitable respiratory protection must be worn. If material is ground, cut, or used in any operation which may generate dusts, use appropriate local exhaust ventilation to keep exposures below the recommended exposure limits.

### 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** Chemical respirator with organic vapour cartridge, full facepiece, dust and mist filter.

#### Skin protection

**- Hand protection** Wear appropriate chemical resistant gloves.

**- Other** Wear suitable protective clothing. Use of an impervious apron is recommended. Personal protection equipment should be chosen according to the CEN standards and in discussion with the supplier of the personal protective equipment.

**Respiratory protection** Chemical respirator with organic vapour cartridge, full facepiece, dust and mist filter.

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

**Hygiene measures** Observe any medical surveillance requirements. Keep away from food and drink. Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

**Environmental exposure controls** Contain spills and prevent releases and observe national regulations on emissions. Inform appropriate managerial or supervisory personnel of all environmental releases. Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. Fume scrubbers, filters or engineering modifications to the process equipment may be necessary to reduce emissions to acceptable levels.

## SECTION 9: Physical and chemical properties

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

<b>Appearance</b>	Powder.
<b>Physical state</b>	Solid.
<b>Form</b>	Powder.
<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>	500 °C (932 °F)
<b>Initial boiling point and boiling range</b>	800 °C (1472 °F)
<b>Flash point</b>	Not available.
<b>Evaporation rate</b>	Not available.

Material name: Lead oxide (Pb3O4)

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<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>	10 mm Hg
<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>	Not available.
<b>Decomposition temperature</b>	Not available.
<b>Viscosity</b>	Not available.
<b>Explosive properties</b>	Not explosive.
<b>Oxidising properties</b>	Not available.

## 9.2. Other information

<b>Density</b>	9,10 g/cm <sup>3</sup>
<b>Molecular formula</b>	O <sub>4</sub> -Pb <sub>3</sub>
<b>Molecular weight</b>	685,6 g/mol
<b>Specific gravity</b>	9,1

## SECTION 10: Stability and reactivity

<b>10.1. Reactivity</b>	Not available.
<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>	Avoid temperatures exceeding the decomposition temperature. Contact with incompatible materials.
<b>10.5. Incompatible materials</b>	None known.
<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>	Harmful if inhaled.
<b>Skin contact</b>	Dust or powder may irritate the skin.
<b>Eye contact</b>	Dust may irritate the eyes.
<b>Ingestion</b>	Harmful if swallowed.

**Symptoms** Dusts may irritate the respiratory tract, skin and eyes.

### 11.1. Information on toxicological effects

<b>Acute toxicity</b>	Harmful if inhaled. Harmful if swallowed.
<b>Skin corrosion/irritation</b>	May be irritating to the skin.
<b>Serious eye damage/eye irritation</b>	Not available.
<b>Respiratory sensitisation</b>	Due to lack of data the classification is not possible.
<b>Skin sensitisation</b>	May be irritating to the skin.
<b>Germ cell mutagenicity</b>	Not available.

### Carcinogenicity

**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 compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6) 2A Probably 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>	May cause damage to organs through prolonged or repeated exposure.
<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>	Very toxic to aquatic life with long lasting effects. Accumulation in aquatic organisms is expected.
<b>12.2. Persistence and degradability</b>	No data is available on the degradability of this product.
<b>12.3. Bioaccumulative potential</b>	No data available.
<b>Partition coefficient n-octanol/water (log Kow)</b>	Not available.
<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>	This substance does not meet vPvB / PBT criteria of Regulation (EC) No 1907/2006, Annex XIII.
<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 soil Data

lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)

Lead (Pb) 300 mg/kg  
Lead (Pb) 50 mg/kg  
Lead (Pb) 600 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. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. 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. UN number** UN1479

**14.2. UN proper shipping name** Oxidizing solid, n.o.s. (lead oxide)  
**14.3. Transport hazard class(es)**  
Class 5.1  
Subsidiary risk -  
**14.4. Packing group** II  
**14.5. Environmental hazards** No.  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### IMDG

**14.1. UN number** UN1479  
**14.2. UN proper shipping name** Oxidizing solid, n.o.s. (lead oxide)  
**14.3. Transport hazard class(es)**  
Class 5.1  
Subsidiary risk -  
**14.4. Packing group** II  
**14.5. Environmental hazards**  
Marine pollutant No.  
**EmS** Not available.  
**14.6. Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

#### IATA; IMDG



**General information** IMDG Regulated Marine Pollutant.

## SECTION 15: Regulatory information

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

#### EU regulations

**Regulation (EC) No. 1005/2009 on substances that deplete the ozone layer, Annex I and II, as amended**  
Not listed.

**Regulation (EU) 2019/1021 On persistent organic pollutants (recast), as amended**  
Not listed.

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

lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)

**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 compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)

**Regulation (EC) No. 1907/2006, REACH Article 59(10) Candidate List as currently published by ECHA**  
lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)

#### 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 compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)

### 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

lead compounds with the exception of those specified elsewhere in this Annex (CAS 1314-41-6)

## Other regulations

This product is not in compliance with Directive 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronics equipment (RoHS). The product is classified and labelled in accordance with Regulation (EC) 1272/2008 (CLP Regulation) as amended. This Safety Data Sheet complies with the requirements of Regulation (EC) No 1907/2006, as amended.

## National regulations

Follow national regulation for work with chemical agents. According to Directive 92/85/EEC as amended, pregnant women should not work with the product, if there is the least risk of exposure.

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. Follow national regulation on the protection of workers from the risks of exposure to carcinogens and mutagens at work, in accordance with Directive 2004/37/EC, as amended.

## 15.2. Chemical safety assessment

No Chemical Safety Assessment has been carried out.

## SECTION 16: Other information

### List of abbreviations

ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways.

ADR: European Agreement concerning the International Carriage of Dangerous Goods by Road.

AGW: Occupational threshold limit value (Arbeitsplatzgrenzwert – Germany).

CAS: Chemical Abstract Service.

CEN: European Committee for Standardization.

IATA: International Air Transport Association.

IBC: Intermediate Bulk Container.

IMDG: International Maritime Dangerous Goods.

MAC: Maximum Allowed Concentration.

MARPOL: International Convention for the Prevention of Pollution from Ships.

PBT: Persistent, bioaccumulative, toxic.

RID: Regulations concerning the International Carriage of Dangerous Goods by Rail.

STEL: Short term exposure limit.

TLV: Threshold Limit Value.

TWA: Time Weighted Average.

VLE: Exposure Limit Value.

VME: Exposure Average Value.

vPvB: Very persistent and very bioaccumulative.

## References

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. Not applicable.

## Training information

Follow training instructions when handling this material.

## Disclaimer

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