



Material Safety Data Sheet

Lead tetroxide

Edition: 21/11/2007

1) Identification of substance/preparation and of the company undertaking

Material Lead tetroxide
 Synonym Lead(II,IV) oxide, Red Lead, Minium
 Cas No 1314-41-6
 Company Inoxia Ltd
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2) Composition

Chemical characterization:

Lead(II,IV)oxide / Pb₃O₄

CAS-No.	EINECS-No.	Index-No.	Designation	%	Symbols	R-Phrases
1314-41-6	215-235-6	082-001-00-6	Lead (II,IV)oxide	100	T, N	20/22, 33, 50/53, 61, 62

3) Hazard Identification

Hazard symbols T (Toxic)
 N (Dangerous for the environment)
 Risk (R) Phrases R 61: May cause harm to the unborn child.
 R 62: Possible risk of impaired fertility.
 R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R 20/22: Harmful by inhalation and if swallowed.
 R 33: Danger of cumulative effects.

Labelling in accordance with the EU regulations 67/548/EEC, 89/178/EEC and latest amendments.

4) First Aid Measures

After inhalation: Supply fresh air and call for medical advice/ doctor.
 After skin contact: Wash skin with mild soap and water. If irritation occurs, consult a doctor.
 After eye contact: Flush with plenty of water for 15 minutes, occasionally forcing open eye-lids; consult a physician if irritation persists.
 Remarks for physician: Intra-corporal lead contamination can be detected by increased lead concentration in blood and/or urine. Check for delta-aminolevulinic acid level.

5) Fire Fighting

Suitable extinguishing media Water spray, foam, carbon dioxide (CO₂), inert powder extinguisher.

Specific hazards due to the substance, combustion products or resultant gases In case of fire lead oxides may be released.

Protective equipment Wear self-contained breathing apparatus.

Further information Dispose of fire debris and contaminated extinguishing water in accordance with federal and local regulations.

6) Accidental Release

Personal precautions Avoid dust formation. Wear suitable protection devices and equipment. Keep away unprotected persons.

Environmental precautions: Do not sweep or wash into public stretches of water, sewers or sites of unknown discharge paths.

Methods of cleaning/absorption: Clean-up with wetting or absorbent material avoiding dusting.

7) Handling/Storage

Instructions on safe handling Avoid breathing dust and use with adequate ventilation provided, required to keep exposure below permissible limit. EEC-Directive Lead (82/605/EEC) and latest amendments as well as corresponding national regulations must be observed.

Information of fire and explosion protection Product is not inflammable.

Storage conditions Store in roofed places at room temperature. Keep containers tightly sealed. Do not store with or close to food and animal feeding stuffs.

Storage class 13

8) Exposure Controls

Additional information about design of technical systems No further data (See Section 7)

Workplace control parameters:

CAS No.	Designation	Conc. %	Type of Data	Unit
1314-41-6	Lead(II,IV) oxide	100	82/605/EWG MAK	0.15 mg Pb/m ³ 0.1 mg Pb/m ³

Personal protective equipment

General protective measures Keep away from food, drink and animal feeding stuffs. When using the material, do not eat, drink, smoke or sniff. Wash hands and/or face prior to breaks and at the end of work.

Respiratory protection Dust mask recommended (P2) when large quantities are processed.

Eye protection Safety glasses

Hand protection Safety gloves

9) Physical/Chemical Properties

Form Powder

Colour	Red
Odour	None
Melting point/range	830°C Method: literature
Flash point	Not flammable
Inflammability	Product is not flammable.
Explosion risks	Product is not explosive.
Vapor pressure	Not applicable
Density: (20°C) 9.0 g/cm ³ Method	DIN EN ISO 787-10
Solubility in water	(20°C) pract. insoluble
Solubility in 0.07 mol/l HCl	100 % Method: DIN EN ISO 6713
pH-Value (at 100 g/l H ₂ O) (20°C)	7-8 Method: DIN EN ISO 787-9

10) Stability/Reactivity

Hazardous decomposition products No decomposition if stored and applied as directed.

Soluble in acids and alkalis.

11) Toxicological Info

Acute toxicity	LD/LD ₅₀ : > 10,000 mg/kg Species: rat Primary irritation (skin/eyes): non-irritant Species: rabbit
Chronic toxicity	Lead oxides are practically insoluble. However, gastric/intestinal fluid dissolves small quantities of lead which might accumulate in part of the human body. Following long-term intake of lead compounds, biosynthesis of hemoglobin and nerve transmission may be affected irreversibly.

12) Ecological Information

Elimination details	Inorganic, water-insoluble product. Can be separated in waste water treatment plants by filtration or sedimentation. Highly alkaline or acidic liquids may dissolve lead due to its amphoteric properties. For total elimination from aqueous media, chemical flocculation is required.
Environmental behaviour:	Due to its content of lead (Pb), avoid release into the environment.

13) Disposal Consideration

Product Special treatment required prior to disposal according to national, regional and local regulations. Disposal site must be suited and officially cleared for the purpose. Avoid combustion.

EAK/EWG 060401 / 100 405

Check re-use as alternative.

Contaminated packaging Contaminated packaging and containers are to be treated like former contents.

EAK/EWG 150199D1 / 150104

14) Transport Information

Land transportation:	
ADR/RID-GGVS/E-Class	6.1
UN-No.	2291
Packing group	III
Label	6

Correct technical name LEAD COMPOUND, SOLUBLE, N.O.S. (Lead Tetraoxide)

Sea transportation:

IMDG/GGVSea-Class 6.1
 Packing group III
 Label 6
 UN-No. 2291
 Subsidiary Risks -
 EMS-No. F-A,S-A
 Marine pollutant P
 Correct technical name LEAD COMPOUND, SOLUBLE, N.O.S. (Lead Tetraoxide)

Air transportation:

ICAO/IATA-Class 6.1
 UN-No. 2291
 Packing group III
 Subsidiary Risks -
 Correct technical name LEAD COMPOUND, SOLUBLE, N.O.S. (Lead Tetraoxide)

15) Regulatory Information

Labelling in accordance with EEC regulations 67/548/EEC (21th adaption) and 89/178/EEC:

In the EEC, lead compounds are classified as "toxic for reproduction, cat. 1"

Symbol and indication of danger T (Toxic)
 N (Dangerous for the environment)

Hazardous components for labelling Lead(II,IV)oxide

Risk (R) Phrases
 R 20/22: Harmful by inhalation and if swallowed
 R 33: Danger of cumulative effects
 R 50/53: Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment
 R 61: May cause harm to the unborn child
 R 62: Possible risk of impaired fertility

Safety (S) Phrases
 S 45: In case of accident or if you feel unwell, seek medical advise immediately (show label where possible)
 S 53: Avoid exposure - obtain special instructions / safety advice before use.

Restricted to professional users.

Special labelling of preparations:

This product contains 90.8 % total lead. A content of lead oxide exceeding 0.5 % (m/m) has to be considered and to be labelled accordingly.

WGK (Water Danger/Protection) CAS# 1314-41-6: 2
 CAS# 1317-36-8: 1

16) Other Information

This product should be stored, handled and used in accordance with good hygiene practices and in conformity with any legal regulations. This information is for health and safety guidance only, is not a material specification, and does not constitute the user's own assessment of suitability, and workplace risk as required by any other Health and Safety legislation. It is accurate to the best of our knowledge and belief, but since the conditions of handling and use are outside our control we make no guarantee of results, and assume no liability for damages incurred by use of this material.

