

## SAFETY DATA SHEET: Lead(II, IV) Oxide

Version: 1.4

Revision Date: 10-21-2020

### Section 1: Identification

#### 1.1) Product identifier:

Product Name : Lead(II, IV) Oxide  
Synonyms : Lead Oxide, red lead, minimum, Orange lead  
Product Number : PO5301  
CAS Number : 1314-41-6

#### 1.2) Company information:

Address: MSE Supplies, LLC  
4400 E Broadway Blvd, Suite 600  
Tucson, AZ 85711, USA  
Telephone: +1 520-789-6673  
Email: [info@mse-supplies.com](mailto:info@mse-supplies.com)  
Emergency Telephone : +1-703-527-3887

#### 1.3) Relevant identified uses of the substance or mixture and uses advised against:

Identifies uses: Laboratory chemicals, Synthesis of substances

### Section 2: Hazard(s) Identification

#### 2.1) Classification of the substance or mixture GHS classification in accordance with 29 CFR 1910 (OSHA HCS):

Oxidizing solids (Category 2), H272  
Acute toxicity, Oral (Category 4), H302  
Acute toxicity, Inhalation (Category 4), H332  
Carcinogenicity (Category 2), H351  
Reproductive toxicity (Category 1A), H360  
Specific target organ toxicity - repeated exposure (Category 1), H372  
Short-term (acute) aquatic hazard (Category 1), H400  
Long-term (chronic) aquatic hazard (Category 1), H410

#### 2.2) GHS Label elements, including precautionary statements:

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**Pictograms:**



**Single word**

**Danger**

**Hazard Statement(s)**

H272	May intensify fire; oxidizer.
H302 + H332	Harmful if swallowed or if inhaled.
H351	Suspected of causing cancer.
H360	May damage fertility or the unborn child.
H372	Causes damage to organs through prolonged or repeated exposure.
H410	Very toxic to aquatic life with long lasting effects.

**Precautionary Statement(s)**

P201	Obtain special instructions before use.
P202	Do not handle until all safety precautions have been read and understood.
P210	Keep away from heat.
P220	Keep/Store away from clothing/ combustible materials.
P221	Take any precaution to avoid mixing with combustibles.
P260	Do not breathe dust/ fume/ gas/ mist/ vapors/ spray.
P264	Wash skin thoroughly after handling.
P270	Do not eat, drink or smoke when using this product.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/ protective clothing/ eye protection/ face protection.
P301 + P312 + P330	IF SWALLOWED: Call a POISON CENTER /doctor if you feel unwell. Rinse mouth.
P304 + P340 + P312	IF INHALED: Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.

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P308 + P313	IF exposed or concerned: Get medical advice/attention.
P370 + P378	In case of fire: Use dry sand, dry chemical or alcohol-resistant foam to extinguish.
P391	Collect spillage.
P405	Store locked up.
P501	Dispose of contents/ container to an approved waste disposal plant.

**2.3) Hazards not otherwise classified (HNOC) or covered by GHS:**

None

Section 3: Composition/Information on Ingredients

**3.1) Substances:**

Formula:  $Pb_3O_4$   
Molecular Weight: 685.6 g/mol  
CAS Number: 1314-41-6  
EC Number: 215-235-6  
Index Number: 082-001-00-6

Component	Classification	Concentration
Orange Lead	Ox. Sol. 2; Acute Tox. 4; Carc. 2; Repr. 1A; STOT RE 1; Aquatic Acute 1; Aquatic Chronic 1; H272, H302, H332, H351, H360, H372, H400, H410  M-Factor - Aquatic Acute: 10	<= 100%

For the full text of the H-Statements mentioned in this Section, see Section 15.

Section 4: First-Aid Measures

**4.1) Description of first aid measures:**

**General advice**

Move out of dangerous area.

**If inhaled**

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If breathed in, move person into fresh air. If not breathing, give artificial respiration.

**In case of skin contact**

Wash off with soap and plenty of water.

**In case of eye contact**

Flush eyes with water as a precaution.

**If swallowed**

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

**4.2) Most important symptoms and effects, both acute and delayed:**

The most important known symptoms and effects are described in the labelling (see section 2.2) and/or in section 11.

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

No data available

### Section 5: Fire-Fighting Measures

**5.1) Suitable extinguishing media:**

Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

**5.2) Special hazards arising from the substance or mixture:**

Lead oxides

**5.3) Advise for firefighters:**

Wear self-contained breathing apparatus for firefighting if necessary.

**5.4) Further information:**

Use water spray to cool unopened containers.

### Section 6: Accidental Release Measures

**6.1) Personal precautions, protective equipment, and emergency procedures:**

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Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

For personal protection see section 8.

### **6.2) Environmental precautions:**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

### **6.3) Methods and materials for containment and cleaning up:**

Sweep up and shovel. Contain spillage, and then collect with an electrically protected vacuum cleaner or by wet-brushing and place in container for disposal according to local regulations (see section 13). Keep in suitable, closed containers for disposal.

### **6.4) Reference to other sections:**

For disposal see section 13.

## Section 7: Handling and Storage

### **7.1) Precautions for safe handling:**

Avoid contact with skin and eyes. Avoid formation of dust and aerosols. Further processing of solid materials may result in the formation of combustible dusts. The potential for combustible dust formation should be taken into consideration before additional processing occurs.

Provide appropriate exhaust ventilation at places where dust is formed. Keep away from sources of ignition - No smoking. Keep away from heat and sources of ignition.

For precautions see section 2.2.

### **7.2) Conditions for safe storage, including any incompatibilities:**

Keep container tightly closed in a dry and well-ventilated place.

Keep in a dry place.

Storage class (TRGS 510): 5.1B: Oxidizing hazardous materials

### **7.3) Specific end use(s):**

Apart from the uses mentioned in section 1.2 no other specific uses are stipulated

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## Section 8: Exposure Controls/Personal Protection

### 8.1) Control parameters:

#### Components with workplace control parameters

Component	CAS-Number	Value	Control Parameters	Basis
Orange lead	1314-41-6	TWA	0.05 mg/m <sup>3</sup>	USA. ACGIH Threshold Limit Values (TLV)
	Remarks	Central Nervous System impairment Hematologic effects Peripheral Nervous System impairment  Substances for which there is a Biological Exposure Index or Indices (see BEI® section)  Confirmed animal carcinogen with unknown relevance to humans varies		
		PEL	0.05 mg/m <sup>3</sup>	OSHA Specifically Regulated Chemicals/Carcinogens
		1910.1025  If an employee is exposed to lead for more than 8 hours in any work day, the permissible exposure limit, as a time weighted average (TWA) for that day, shall be reduced according to the following formula: Maximum permissible limit (in µg/m <sup>3</sup> ) = 400 ÷ hours worked in the day  This section applies to all occupational exposure to lead, except as provided in paragraph (a)(2). It does not apply to the construction industry or to agricultural operations covered by 29 CFR part 1928.  OSHA specifically regulated carcinogen		
		TWA	0.05 mg/m <sup>3</sup>	USA. NIOSH Recommended Exposure Limits
		See Appendix C		
		PEL	0.05 mg/m <sup>3</sup>	California permissible exposure limits for chemical contaminants (Title 8, Article 107)

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		see Section 5198
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Biological occupational exposure limits

Component	CAS-Number	Parameters	Value	Biological Specimen	Basis
Orange Lead	1314-41-6	Lead	200 µg/l	In Blood	ACGIH - Biological Exposure Indices (BEI)
	Remarks	Not Critical			

**8.2) Exposure controls:**

**Appropriate engineering controls:**

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

**Personal protective equipment**

**Eye/face protection:**

Face shield and safety glasses Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

**Skin protection:**

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands.

**Body protection:**

Complete suit protecting against chemicals, The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

**Respiratory protection:**

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use

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respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

**Control of environmental exposure:**

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

Section 9: Physical and Chemical Properties

**9.2) Information on basic physical and chemical properties:**

a) Appearance (physical state, color, etc.)	Orange/Red powder
b) Upper/lower flammability or explosive limits	No data available
c) Odor	No data available
d) Odor threshold	No data available
e) Vapor pressure	No data available
f) Vapor density	No data available
g) pH	No data available
h) Density	8.3 g/cm <sup>3</sup> at 25 °C
i) Melting point/freezing point	500 °C (decomposition)
j) Solubility(ies)	No data available
k) Initial boiling point and boiling range	No data available
l) Flash point	No data available
m) Evaporation rate	No data available
n) Flammability (solid, gas)	No data available
o) Partition coefficient: n-octanol/water	No data available
q) Auto-ignition temperature	No data available
r) Decomposition temperature	No data available
s) Viscosity	No data available
t) Explosive properties	No data available



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u) Oxidizing properties	The substance or mixture is classified as oxidizing with the category 2.
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**9.2) Other Safety information:**

No data available

Section 10: Stability and Reactivity

**10.1) Reactivity:**

No data available

**10.2) Chemical Stability:**

Stable under recommended storage conditions.

**10.3) Possibility of hazardous reactions:**

No data available

**10.4) Conditions to avoid:**

No data available

**10.5) Incompatible materials:**

Strong reducing agents

**10.6) Hazardous decomposition products:**

Hazardous decomposition products formed under fire conditions. - Lead oxides Other decomposition products - No data available

In the event of a fire: see section 5.

Section 11: Toxicological Information

**11.1) Information on toxicological effects:**

**Acute toxicity:**

No data available

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**Skin corrosion/irritation:**

No data available

**Serious eye damage/ eye irritation:**

No data available

**Respiratory or skin sensitization:**

No data available

**Germ cell mutagenicity:**

No data available

**Carcinogenicity:**

This product is or contains a component that has been reported to be possibly carcinogenic based on its IARC, ACGIH, NTP, or EPA classification.

Limited evidence of a carcinogenic effect.

**IARC:** 2A - Group 2A: Probably carcinogenic to humans (Orange lead).

**NTP:** RAHC - Reasonably anticipated to be a human carcinogenThe reference note has been added by TD based on the background information of the NTP. (Orange lead).

**OSHA:** OSHA specifically regulated carcinogen (Orange lead).

**Reproductive toxicity:**

Known human reproductive toxicant

**Specific target organ toxicity – single exposure:**

No data available

**Specific target organ toxicity – repeated exposure:**

No data available

**Aspiration hazard:**

No data available

**Additional information:**

RTECS: Not available

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Lead salts have been reported to cross the placenta and to induce embryo- and fetotoxicity. They also have teratogenic effect in some animal species. No teratogenic effects have been reported with exposure to organometallic lead compounds. Adverse effects of lead on human reproduction, embryonic and fetal development, and postnatal (e.g., mental) development have been reported. Excessive exposure can affect blood, nervous, and digestive systems. The synthesis of hemoglobin is inhibited and results in anemia. If left untreated, neuromuscular dysfunction, possible paralysis, and encephalopathy can result. Additional symptoms of overexposure include: joint and muscle pain, weakness of the extensor muscles (frequently the hand and wrist), headache, dizziness, abdominal pain, diarrhea, constipation, nausea, vomiting, blue line on the gums, insomnia, and metallic taste. High body levels produce increased cerebrospinal pressure, brain damage, and stupor leading to coma and often death., Anorexia., Vomiting, Convulsions, To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

### Section 12: Ecological Information

#### **12.1) Toxicity:**

No data available

#### **12.2) Persistence and degradability:**

No data available

#### **12.3) Bioaccumulative potential:**

No data available

#### **12.4) Mobility in soil:**

No data available

#### **12.5) Results of PBT and vPvB assessment:**

PBT/vPvB assessment not available as chemical safety assessment not required/not conducted

#### **12.6) Other adverse effects:**

An environmental hazard cannot be excluded in the event of unprofessional handling or disposal.

Very toxic to aquatic life with long lasting effects.

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### Section 13: Disposal Considerations

#### 13.1) Waste treatment methods:

##### Product:

Contact a licensed professional waste disposal service to dispose of this material. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Offer surplus and non-recyclable solutions to a licensed disposal company.

##### Contaminated packaging:

Dispose of as unused product.

### Section 14: Transport Information

#### DOT (US):

UN number: 1479 Class: 5.1 Packing group: II  
Proper shipping name: Oxidizing solid, n.o.s. (Orange lead)  
Poison Inhalation Hazard: No

#### IMDG:

UN number: 1479 Class: 5.1 Packing group: II EMS-No: F-A, S-Q  
Proper shipping name: OXIDIZING SOLID, N.O.S. (Orange lead)  
Marine pollutant : yes

#### IATA:

UN number: 1479 Class: 5.1 Packing group: II  
Proper shipping name: Oxidizing solid, n.o.s. (Orange lead)

### Section 15: Regulatory Information



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### SARA 302 Components:

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

### SARA 313 Components:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimis) reporting levels established by SARA Title III, Section 313.

### SARA 311/312 Hazards:

Reactivity Hazard, Acute Health Hazard, Chronic Health Hazard

### Massachusetts Right To Know Components:

Orange Lead	CAS #	Revision Date
	1314-41-6	1993-04-24

### Pennsylvania Right To Know Components:

Orange Lead	CAS #	Revision Date
	1314-41-6	1993-04-24

### New Jersey Right To Know Components:

Orange Lead	CAS #	Revision Date
	1314-41-6	1993-04-24

### California Prop. 65 Components:

WARNING! This product contains a chemical known to the State of California to cause cancer.

Orange Lead	CAS #	Revision Date
	1314-41-6	2007-09-28

## Section 16: Other Information

### Further information

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. MSE Supplies LLC and its Affiliates shall not be held liable for any damage resulting from handling or from contact with the above product.

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