

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 03.06.2015

Page 1 of 8

## Lead Dioxide

### SECTION 1: Identification of the substance/mixture and of the supplier

**Product name:** Lead Dioxide

**Manufacturer/Supplier Trade name:**

**Manufacturer/Supplier Article number:** S25380

**Recommended uses of the product and restrictions on use:**

**Manufacturer Details:**

AquaPhoenix Scientific, Inc  
9 Barnhart Drive, Hanover, PA 17331  
(717) 632-1291

**Supplier Details:**

Fisher Science Education  
6771 Silver Crest Road, Nazareth, PA 18064  
(724)517-1954

**Emergency telephone number:**

**Fisher Science Education**  
Emergency Telephone No.: 800-535-5053

### SECTION 2: Hazards identification

**Classification of the substance or mixture:**



**Oxidizing**

Oxidizing solids, category 3



**Irritant**

Acute toxicity (oral, dermal, inhalation), category 4



**Health hazard**

Carcinogenicity, category 1B

Reproductive toxicity, category 1A

Specific target organ toxicity following repeated exposure, category 2



**Environmentally Damaging**

Acute hazards to the aquatic environment, category 1

Chronic hazards to the aquatic environment, category 1

Oxidizing Solids 3.

Ac. Oral Tox. 4.

Ac. Inhal Tox. 4.

Carcin 1B.

Repro Tox. 1A.

STOT RE 2.

Aq. AcTox. 1.

Aq. ChrTox. 1.

**Signal word:** Danger

**Hazard statements:**

May intensify fire; oxidizer.

Harmful if swallowed.

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 03.06.2015

Page 2 of 8

## Lead Dioxide

Harmful if inhaled.  
May cause cancer.  
May damage fertility or the unborn child.  
May cause damage to organs through prolonged or repeated exposure.  
Very toxic to aquatic life with long lasting effects.

### Precautionary statements:

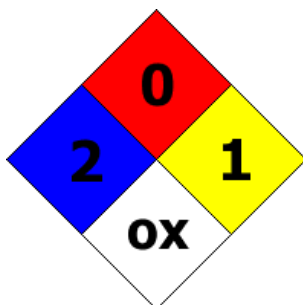
If medical advice is needed, have product container or label at hand.  
Keep out of reach of children.  
Read label before use.  
Obtain special instructions before use.  
Avoid release to the environment.  
Wear protective gloves/protective clothing/eye protection/face protection.  
Use personal protective equipment as required.  
Do not handle until all safety precautions have been read and understood.  
Keep away from heat/sparks/open flames/hot surfaces. No smoking.  
Keep/Store away from clothing/combustible materials.  
Take any precaution to avoid mixing with combustibles.  
Do not breathe dust/fume/gas/mist/vapours/spray.  
Wash skin thoroughly after handling.  
Do not eat, drink or smoke when using this product.  
Use only outdoors or in a well-ventilated area.  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.  
Rinse mouth.  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Call a POISON CENTER or doctor/physician if you feel unwell.  
IF exposed or concerned: Get medical advice/attention.  
In case of fire: Use agents recommended in section 5 for extinction.  
Collect spillage.  
Store locked up.  
Dispose of contents and container as instructed in Section 13.

### Other Non-GHS Classification:

#### WHMIS



#### NFPA/HMIS



NFPA SCALE (0-4)

Health	2
Flammability	0
Physical Hazard	1
Personal Protection	X

HMIS RATINGS (0-4)

## Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 03.06.2015

Page 3 of 8

### Lead Dioxide

#### SECTION 3: Composition/information on ingredients

Ingredients:		
CAS 1309-60-0	Lead dioxide	<100 %
Percentages are by weight		

#### SECTION 4: First aid measures

##### Description of first aid measures

###### After inhalation:

Seek medical attention. Move exposed to fresh air. Give artificial respiration if necessary. If breathing is difficult give oxygen. Loosen clothing and place exposed in a comfortable position.

###### After skin contact:

Seek medical attention. Wash hands and exposed skin with soap and plenty of water.

###### After eye contact:

Immediately seek medical attention. Protect unexposed eye. Flush exposed eye gently using water for 15-20 minutes. Remove contact lenses while rinsing. Keep eye lids open while rinsing.

###### After swallowing:

Rinse mouth with water. Do not induce vomiting. Never give anything by mouth to an unconscious person. Immediately seek medical attention.

##### Most important symptoms and effects, both acute and delayed:

1309-60-0 loss of appetite, insomnia, weakness, muscle pain. Irritation. Shortness of breath. Headache. Nausea. Dizziness. 1309-60-0 Large dust exposure may cause encephalopathy, seizures, coma, and cardio respiratory arrest. 1309-60-0 Ingestion may lead to dizziness, abdominal cramps, vomiting, bloody diarrhea, metallic taste, weakness, and convulsions.

##### Indication of any immediate medical attention and special treatment needed:

If seeking medical attention provide SDS document to physician. Physician should treat symptomatically.

#### SECTION 5: Firefighting measures

##### Extinguishing media

###### Suitable extinguishing agents:

Use water spray to cool unopened containers. Use only water if in contact with burning combustibles.

###### Unsuitable extinguishing agents:

When dry acts as an oxidizer towards organics. Smothering the fire may not be effective.

##### Special hazards arising from the substance or mixture:

Toxic lead oxides fumes. Combustible dust formation is a risk. Oxidizer, may explode if heated as an intimate mixture with a combustible. Thermal decomposition can lead to release of irritating gases and vapors.

##### Advice for firefighters:

###### Protective equipment:

Wear protective eyewear, gloves, and clothing. Refer to Section 8.

###### Additional information (precautions):

Avoid dust formation. Avoid inhaling gases, fumes, dust, mist, vapor, and aerosols. Avoid contact with skin, eyes, and clothing.

## Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 03.06.2015

Page 4 of 8

### Lead Dioxide

#### SECTION 6: Accidental release measures

##### Personal precautions, protective equipment and emergency procedures:

Ensure adequate ventilation. Ensure that air-handling systems are operational.

##### Environmental precautions:

Should not be released into environment. Prevent from reaching drains, sewer, or waterway.

##### Methods and material for containment and cleaning up:

Pick up and arrange disposal without creating dust. Sweep up and shovel. Small spills can be mixed with vermiculite or sodium carbonate and swept up. Do not mix reclaimed spills with combustible waste. Wear protective eyewear, gloves, and clothing. Refer to Section 8. Always obey local regulations. If necessary use trained response staff or contractor. Evacuate personnel to safe areas. Containerize for disposal. Refer to Section 13. Keep in suitable closed containers for disposal.

Reference to other sections: None

#### SECTION 7: Handling and storage

##### Precautions for safe handling:

Avoid contact with skin, eyes, and clothing. Follow good hygiene procedures when handling chemical materials. Refer to Section 8. Follow proper disposal methods. Refer to Section 13. Do not eat, drink, smoke, or use personal products when handling chemical substances.

##### Conditions for safe storage, including any incompatibilities:

Store in a cool location. Keep away from food and beverages. Protect from freezing and physical damage. Provide ventilation for containers. Keep container tightly sealed. Store away from incompatible materials.

#### SECTION 8: Exposure controls/personal protection



##### Control Parameters:

1309-60-0, Lead dioxide, TWA 0.05 mg/m<sup>3</sup> USA. ACGIH.  
1309-60-0, Lead dioxide, TWA 0.05 mg/m<sup>3</sup> USA. NIOSH.  
1309-60-0, Lead dioxide, PEL 0.05 mg/m<sup>3</sup> OSHA.

##### Appropriate Engineering controls:

Emergency eye wash fountains and safety showers should be available in the immediate vicinity of use or handling. Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapor and mists below the applicable workplace exposure limits (Occupational Exposure Limits-OELs) indicated above.

##### Respiratory protection:

If handling material in the form of a fine dust and ventilation is not available a respirator should be worn. The use of respirators requires a Respirator Protection Program to be in compliance with 29 CFR 1910.134. Material may form or contain a fine dust that may become airborne during handling. If possible handle the material in an efficient fume hood. Not required under normal conditions of use. 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. When necessary use NIOSH approved breathing equipment.

## Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 03.06.2015

Page 5 of 8

### Lead Dioxide

#### Protection of skin:

Select glove material impermeable and resistant to the substance. Select glove material based on rates of diffusion and degradation. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Use proper glove removal technique without touching outer surface. Avoid skin contact with used gloves. Wear protective clothing.

#### Eye protection:

Wear equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU). Safety glasses or goggles are appropriate eye protection.

#### General hygienic measures:

Perform routine housekeeping. Wash hands before breaks and immediately after handling the product. Avoid contact with skin, eyes, and clothing. Before rewearing wash contaminated clothing.

### SECTION 9: Physical and chemical properties

<b>Appearance (physical state, color):</b>	Dark brown solid	<b>Explosion limit lower:</b>	Not Determined
		<b>Explosion limit upper:</b>	Not Determined
<b>Odor:</b>	Odorless	<b>Vapor pressure at 20°C:</b>	Not Determined
<b>Odor threshold:</b>	Not Determined	<b>Vapor density:</b>	Not Determined
<b>pH-value:</b>	Not Determined	<b>Relative density:</b>	Not Determined
<b>Melting/Freezing point:</b>	290 °C	<b>Solubilities:</b>	Insoluble in water.
<b>Boiling point/Boiling range:</b>	Not Determined	<b>Partition coefficient (n-octanol/water):</b>	Not Determined
<b>Flash point (closed cup):</b>	Not Determined	<b>Auto/Self-ignition temperature:</b>	Not Determined
<b>Evaporation rate:</b>	Not Determined	<b>Decomposition temperature:</b>	> 290 °C
<b>Flammability (solid, gaseous):</b>	Not Determined	<b>Viscosity:</b>	a. Kinematic: Not Determined b. Dynamic: Not Determined
<b>Density at 20°C:</b>	Not Determined		

### SECTION 10: Stability and reactivity

#### Reactivity:

Reacts with metallic powders.

#### Chemical stability:

Stable under normal conditions.

#### Possible hazardous reactions:

None under normal processing.

#### Conditions to avoid:

Incompatible materials. Dust formation.

#### Incompatible materials:

Reducing agents, organic materials, active metals, halogens azides, and fulminates.

#### Hazardous decomposition products:

Lead oxides. Oxygen gases.

### SECTION 11: Toxicological information

## Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 03.06.2015

Page 6 of 8

### Lead Dioxide

**Acute Toxicity:** No additional information.

**Chronic Toxicity:** No additional information.

**Corrosion Irritation:** No additional information.

**Sensitization:** No additional information.

**Numerical Measures:** No additional information.

**Carcinogenicity:**

1309-60-0 : OSHA specifically regulated carcinogen ( Lead dioxide)

**Mutagenicity:** No additional information.

**Reproductive Toxicity:**

1309-60-0 May cause congenital malformation in the fetus. 1309-60-0 Known human reproductive toxicant.

### SECTION 12: Ecological information

**Ecotoxicity:**

1309-60-0: Very toxic to the aquatic environment. May cause long-term adverse effects in the aquatic environment.

**Persistence and degradability:** No additional information.

**Bioaccumulative potential:** No additional information.

**Mobility in soil:** No additional information.

**Other adverse effects:** No additional information.

### SECTION 13: Disposal considerations

**Waste disposal recommendations:**

Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable. Contact a licensed professional waste disposal service to dispose of this material. Dispose of empty containers as unused product. Product or containers must not be disposed together with household garbage. It is the responsibility of the waste generator to properly characterize all waste materials according to applicable regulatory entities (US 40CFR262.11). Chemical waste generators must determine whether a discarded chemical is classified as a hazardous waste. Chemical waste generators must also consult local, regional, and national hazardous waste regulations. Ensure complete and accurate classification.

### SECTION 14: Transport information

#### US DOT

**UN Number:**

ADR, ADN, DOT, IMDG, IATA

1872

**Limited Quantity Exception:**

None

**Bulk:**

**RQ (if applicable):** None

**Proper shipping Name:** Lead dioxide.

**Hazard Class:** 5

**Packing Group:** III.

**Marine Pollutant (if applicable):** No additional information.

**Non Bulk:**

**RQ (if applicable):** None

**Proper shipping Name:** Lead dioxide.

**Hazard Class:** 5

**Packing Group:** III.

**Marine Pollutant (if applicable):** No additional information.

# Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

Effective date : 03.06.2015

Page 7 of 8

## Lead Dioxide

Comments: None

Comments: None



### SECTION 15: Regulatory information

#### United States (USA)

##### SARA Section 311/312 (Specific toxic chemical listings):

Reactive, Acute, Chronic

##### SARA Section 313 (Specific toxic chemical listings):

None of the ingredients are listed.

##### RCRA (hazardous waste code):

None of the ingredients are listed.

##### TSCA (Toxic Substances Control Act):

All ingredients are listed.

##### CERCLA (Comprehensive Environmental Response, Compensation, and Liability Act):

None of the ingredients are listed.

#### Proposition 65 (California):

##### Chemicals known to cause cancer:

None of the ingredients are listed.

##### Chemicals known to cause reproductive toxicity for females:

None of the ingredients are listed.

##### Chemicals known to cause reproductive toxicity for males:

None of the ingredients are listed.

##### Chemicals known to cause developmental toxicity:

None of the ingredients are listed.

#### Canada

##### Canadian Domestic Substances List (DSL):

All ingredients are listed.

##### Canadian NPRI Ingredient Disclosure list (limit 0.1%):

None of the ingredients are listed.

##### Canadian NPRI Ingredient Disclosure list (limit 1%):

None of the ingredients are listed.

### SECTION 16: Other information

This product has been classified in accordance with hazard criteria of the Controlled Products Regulations and the SDS contains all the information required by the Controlled Products Regulations. Note. The responsibility to provide a safe workplace remains with the user. The user should consider the health hazards and safety information contained herein as a guide and should take those precautions required in an individual operation to instruct employees and develop work practice procedures for a safe work environment. The information contained herein is, to the best of our knowledge and belief, accurate. However, since the conditions of

## Safety Data Sheet

according to 29CFR1910/1200 and GHS Rev. 3

**Effective date :** 03.06.2015

Page 8 of 8

### Lead Dioxide

handling and use are beyond our control, we make no guarantee of results, and assume no liability for damages incurred by the use of this material. It is the responsibility of the user to comply with all applicable laws and regulations applicable to this material.

**GHS Full Text Phrases:** None

**Abbreviations and Acronyms:** None

**Effective date:** 03.06.2015

**Last updated:** 06.17.2015