Lead (IV) Oxide

MSDS # 401.00

Section 1: Product and Company Identification

Lead (IV) Oxide

Synonyms/General Names: Lead Dioxide, Lead Peroxide
Product Use: For educational use only
Manufacturer: Columbus Chemical Industries, Inc., Columbus, WI 53925.

24 Hour Emergency Information Telephone Numbers

CHEMTREC (USA): 800-424-9300 **CANUTEC (Canada): 613-424-6666**

ScholAR Chemistry; 5100 W. Henrietta Rd, Rochester, NY 14586; (866) 260-0501; www.Scholarchemistry.com

Section 2: Hazards Identification

Dark brown to black powder, no odor.

HMIS (0 to 4)

Health	2
Fire Hazard	0
Reactivity	1

CAUTION! Moderately toxic by ingestion and possible carcinogen. Strong oxidizing agent
Target organs: Gastrointestinal, endocrine and immune systems, blood, heart

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Section 3: Composition / Information on Ingredients

Lead (IV) Oxide (1309-60-0), 100%

Section 4: First Aid Measures

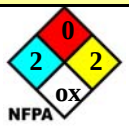
Always seek professional medical attention after first aid measures are provided.

Eyes: Immediately flush eyes with excess water for 15 minutes, lifting lower and upper eyelids occasionally.
Skin: Immediately flush skin with excess water for 15 minutes while removing contaminated clothing.
Ingestion: Call Poison Control immediately. Rinse mouth with cold water. Give victim 1-2 cups of water or milk to drink. Induce vomiting immediately.
Inhalation: Remove to fresh air. If not breathing, give artificial respiration.

Section 5: Fire Fighting Measures

Strong Oxidizer When heated to decomposition, emits acrid fumes.

Protective equipment and precautions for firefighters: Use foam or dry chemical to extinguish fire. Firefighters should wear full fire fighting turn-out gear and respiratory protection (SCBA). Cool container with water spray. Material is not sensitive to mechanical impact or static discharge.



Section 6: Accidental Release Measures

Use personal protection recommended in Section 8. Isolate the hazard area and deny entry to unnecessary and unprotected personnel. Sweep up spill and place in sealed bag or container for disposal. Wash spill area after pickup is complete. See Section 13 for disposal information.

Section 7: Handling and Storage Yellow

Handling: Use with adequate ventilation and do not breathe dust or vapor. Avoid contact with skin, eyes, or clothing. Wash hands thoroughly after handling.

Storage: Store in Oxidizer Storage Area [Yellow Storage] with other oxidizers and away from any combustible materials. Store in a cool, dry, well-ventilated, locked store room away from incompatible materials.

Section 8: Exposure Controls / Personal Protection

Use ventilation to keep airborne concentrations below exposure limits. Have approved eyewash facility, safety shower, and fire extinguishers readily available. Wear chemical splash goggles and chemical resistant clothing such as gloves and aprons. Wash hands thoroughly after handling material and before eating or drinking. Use NIOSH-approved respirator with a dust cartridge. Exposure guidelines: Lead Oxide: OSHA PEL: 0.05 mg/m^3, ACGIH: TLV: 0.05 mg/m^3, STEL: N/A

Section 9: Physical and Chemical Properties

Molecular formula	PbO_2.	**Appearance**	Dark brown to black powder.
Molecular weight	239.20.	**Odor**	No odor.
Specific Gravity	8.9 g/mL @ 20°C.	**Odor Threshold**	N/A.
Vapor Density (air=1)	N/A.	**Solubility**	Insoluble in water.
Melting Point	290°C decomposes.	**Evaporation rate**	N/A. *(Butyl acetate = 1).*
Boiling Point/Range	N/A.	**Partition Coefficient**	N/A. *(log P_{OW}).*
Vapor Pressure (20°C)	N/A.	**pH**	N/A.
Flash Point:	N/A.	**LEL**	N/A.
Autoignition Temp.:	N/A.	**UEL**	N/A.

N/A = Not available or applicable

Section 10: Stability and Reactivity

Avoid heat and moisture.
Stability: Stable under normal conditions of use and storage.
Incompatibility: Reducing agents and combustible materials
Shelf life: Indefinite if stored properly.

Section 11: Toxicology Information

Acute Symptoms/Signs of exposure: ***Eyes***: Redness, tearing, itching, burning, conjunctivitis. ***Skin***: Redness, itching. ***Ingestion***: Irritation and burning sensations of mouth and throat, nausea, vomiting and abdominal pain. ***Inhalation***: Irritation of mucous membranes, coughing, wheezing, shortness of breath,
Chronic Effects: Possible carcinogen. Evidence now suggests that blood levels of lead below10 µg/dL can have the effect of diminishing the IQ scores of children. Low levels of lead impair neurotransmission and immune system function and may increase systolic blood pressure. Severe toxicity can cause sterility, abortion, and neonatal mortality and morbidity. An experimental teratogen. Experimental reproductive effects.
Sensitization: none expected
Lead Oxide: LD50 [oral, rat]; N/A; LC50 [rat]; N/A; LD50 Dermal [rabbit]; N/A
Material has been found to be a carcinogen and produce genetic, reproductive, or developmental effects.

Section 12: Ecological Information

Ecotoxicity (aquatic and terrestrial): Marine pollutant. Contains a heavy metal – Toxic to terrestrial and aquatic plants and animals. Do not release to the environment

Section 13: Disposal Considerations

Check with all applicable local, regional, and national laws and regulations. Local regulations may be more stringent than regional or national regulations. Small amounts of this material may be suitable for sanitary sewer or trash disposal.

Section 14: Transport Information

DOT Shipping Name:	Lead Dioxide.	**Canada TDG:**	Lead Dioxide.
DOT Hazard Class:	5.1, pg III.	**Hazard Class:**	5.1, pg III.
Identification Number:	UN1872.	**UN Number:**	UN1872.

Section 15: Regulatory Information

EINECS: Listed (215-174-5).
TSCA: All components are listed or are exempt.
WHMIS Canada: C, D2A: Oxidizing, Very toxic material .
California Proposition 65: Listed Cancer.
The product has been classified in accordance with the hazard criteria of the Controlled Products Regulations and the MSDS contains all the information required by the Controlled Products Regulations.

Section 16: Other Information

Current Issue Date: January 23, 2009