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TECHNO PHARMCHEM
An ISO 9001 : 2008 Certified Company
Registered Off. : 101-A, Deep Enclave, Pocket "D", Ashok Vihar, Phase-III, Delhi-110 052 (India)
Corporate Off. : 152, Vardhman City Centre, Near Shakti Nagar Underbridge, Delhi-110052 (India)
Works : Plot No.1022, Modern Industrial Estate, Bahadurgarh-124507, Haryana (India)
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LEAD DIOXIDE

1. Product Identification
Synonyms: Lead peroxide; lead superoxide; lead oxide brown; lead (IV) oxide; lead brown
CAS No.: 1309-60-0
Molecular Weight: 239.20
Chemical Formula: PbO_2
Product Codes: 38297

2. Composition/Information on Ingredients

Ingredient	CAS No	Percent
Lead Peroxide	1309-60-0	95 - 100%

3. Hazards Identification
Potential Health Effects

Inhalation: Lead can be absorbed through the respiratory system. Local irritation of bronchia And lungs can occur and, in cases of acute exposure, symptoms such as metallic taste, chest and abdominal pain, and increased lead blood levels may follow. See also Ingestion.
Ingestion: The symptoms of lead poisoning include abdominal pain and spasms, nausea, vomiting, headache. Acute poisoning can lead to muscle weakness, "lead line" on the gums, metallic taste, definite loss of appetite, insomnia, dizziness, high lead levels in blood
Skin Contact: Lead and lead compounds may be absorbed through the skin on prolonged exposure; The symptoms of lead poisoning described for ingestion exposure may occur. Contact over short periods may cause local irritation, redness and pain.
Eye Contact: Absorption can occur through eye tissues but the more common hazards are local irritation or abrasion.
Chronic Exposure: Lead is a cumulative poison and exposure even to small amounts can raise the body's content to toxic levels. The symptoms of chronic exposure are like those of ingestion poisoning; restlessness, irritability, visual disturbances, hypertension and gray facial color may also be noted.
Aggravation of Pre-existing Conditions: Persons with pre-existing kidney, nerve or circulatory disorders or with skin or eye problems may be more susceptible to the effects of this substance.

4. First Aid Measures
Inhalation: Remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.
Ingestion: Induce vomting immediately as directed by medical personnel. Never give anything by mouth to an unconscious person. Get medical attention.
Skin Contact:
Immediately flsh skin with plenty of soap and water for at least 15 minutes. Remove contaminated clothing and shoes. Get medical attention. Wash clothing before reuse. Thoroughly clean shoes before reuse.
Eye Contact: Immediately flush eyes with plenty of water for at least 15 minutes, lifting lower and upper eyelids occasionally. Get medical attention immediately.

5. Fire Fighting Measures
Fire: Not combustible, but substance is a strong oxidizer and its heat of reaction with reducing agents or combustibles may cause ignition.
Explosion: Strong oxidants may explode when shocked, or if exposed to heat, flame, or friction. Also may act as initiation source for dust or vapor explosions.
Fire Extinguishing Media: Use any means suitable for extinguishing surrounding fire. Do not allow water runoff to enter sewers or waterways.
Special Information: Wear full protective clothing and breathing equipment for high-intensity fire or potential explosion conditions.

6. Accidental Release Measures
Ventilate area of leak or spill. Wear appropriate personal protective equipment as specified in Section 8. Spills: Sweep up and containerize for reclamation or disposal. Vacuuming or wet sweeping may be used to avoid dust dispersal.

7. Handling and Storage
Keep in a tightly closed container. Store in a cool, dry, ventilated area away from sources of heat or ignition. Protect against physical damage. Store separately from reactive or combustible materials, and out of direct sunlight. Isolate from incompatible substances.

8. Exposure Controls/Personal Protection
Airborne Exposure Limits:
For lead, metal and inorganic dusts and fumes, as Pb: -OSHA Permissible Exposure Limit (PEL): 0.05 mg/m3 (TWA) For lead, elemental and inorganic compounds, as Pb: -ACGIH Threshold Limit Value (TLV): 0.05 mg/m3 (TWA), A3 animal carcinogen ACGIH Biological Exposure Indices (BEI): 30 ug/100ml, notation B (see actual Indices for more information). For lead, inorganic: -NIOSH Recommended Exposure Limit (REL): 0.1 mg/m3 (TWA)
Ventilation System:
A system of local and/or general exhaust is recommended to keep employee exposures below the Airborne Exposure Limits. Local exhaust ventilation is generally preferred because it can control the emissions of the contaminant at its source, preventing dispersion of it into the general work area.
Personal Respirators (NIOSH Approved): If the exposure limit is exceeded, a half-face high efficiency dust/mist respirator may be worn for up to ten times the exposure limit or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier , whichever is lowest. A full face piece high efficiency dust/mist respirator may be worn up to 50 times the exposure limit, or the maximum use concentration specified by the appropriate regulatory agency or respirator supplier, whichever is lowest. For emergencies or instances where the exposure levels are not known, use a full-facepiece positive-pressure, air-supplied respirator.
Skin Protection: Wear impervious protective clothing, including boots, gloves, lab coat, apron or coveralls, as appropriate, to prevent skin contact.

Eye Protection: Use chemical safety goggles and/or full face shield where dusting or splashing of solutions is possible. Maintain eye wash fountain and quick-drench facilities in work area.
Other Control Measures: Eating, drinking, and smoking should not be permitted in areas where

solids or liquids containing lead compounds are handled, processed, or stored. See OSHA substance specific standard for more information on personal protective equipment, engineering and work practice controls, medical surveillance, record keeping, and reporting requirements.

9. Physical and Chemical Properties
Appearance: Dark brown powder.
Odor: Odorless.
Solubility: Insoluble in water.
Specific Gravity: 9.38
pH: No information found.
% Volatiles by volume @ 21C (70F): 0
Boiling Point: Not applicable.
Melting Point: ca. 290C (ca. 554F) Decomposes.
Vapor Density (Air=1): 8.2
Vapor Pressure (mm Hg): No information found.
Evaporation Rate (BuAc=1): No information found.

10. Stability and Reactivity
Stability: Stable under ordinary conditions of use and storage.
Hazardous Decomposition Products: Decomposes to oxygen and lead oxide at 290C (554F), lead monoxide at higher temperatures.
Hazardous Polymerization: Will not occur.
Incompatibilities: Aluminum carbide, sulfides, hydrogen peroxide, hydroxylamine, combustible and organic materials.
Conditions to Avoid: Heat, shock, friction, incompatibles.

11. Toxicological Information
Toxicological Data:
No LD50/LC50 information found relating to normal routes of occupational exposure.
Reproductive Toxicity:
Lead and other smelter emissions are human reproductive hazards.
Carcinogenicity:
For lead and inorganic lead compounds: EPA / IRIS classification: Group B2 - Probable human carcinogen, sufficient animal evidence.

--------\Cancer Lists\----------

	---NTP Carcinogen---		
Ingredient	Known	Anticipated	IARC Category
Lead Dioxide (1309-60-0)	No	No	2B

12. Ecological Information
Environmental Fate: For lead and inorganic lead compounds: When released into the soil, this material is not expected to leach into groundwater. This material may bioaccumulate to some extent.
Environmental Toxicity: No information found.

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13. Disposal Considerations
Dispose of container and unused contents in accordance with federal, state and local requirements.

14. Transport Information
Land

Proper Shipping Name: Lead Dioxide
Hazard Class: 5.1
UN/NA: UN1872
Packing Group: III
Information reported for product/size: 200LB

International (Water, I.M.O.)

Proper Shipping Name: Lead Dioxide
Hazard Class: 5.1
UN/NA: UN1872
Packing Group: III
Information reported for product/size: 200LB

International (Air, I.C.A.O.)

Proper Shipping Name: Lead Dioxide
Hazard Class: 5.1
UN/NA: UN1872
Packing Group: III
Information reported for product/size: 200LB

15. Regulatory Information
SARA 311/312: Acute: Yes Chronic: Yes Fire: Yes Pressure: No
Reactivity: No (Pure / Solid)

16. Other Information
Product Use:
Laboratory Reagent.