

GHS Safety Data Sheet

SDS No. : PBO03PAEG

Date Issued : 2023/10/19

Section 1. Identification of the substance or mixture and of the supplier

Product Information

Product name: **PbO₂ Lead(IV) oxide**

Product number:	Purity	Form	Size or Shape
PBO13PB	99%(2N)	Powder	—
—	99%(2N)Others	Powder	Various sizes

Company Information:

Manufacturer : Kojundo Chemical Laboratory Co., Ltd.
 1-28, 5-chome, Chiyoda, Sakado-shi, Saitama Japan 350-0284
 Phone: +81-49-284-1511 Fax: +81-49-284-1351
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Recommended uses and restrictions on use: For research purposes

Section 2. Hazards identification

GHS Classification

Health Hazards	Environmental Hazards	Physical Hazards
Skin corrosion/irritation:Category 2 Serious eye damage/eye irritation: Category2A Carcinogenicity:Category 2 Reproductivetoxicity:Category1A Specific target organ toxicity, single exposure : Category1 Specific target organ toxicity, repeated exposure : Category1	No data available	Oxidizing solids: Category 3 Flammable solids : Not classified Pyrophoric solids : Not classified Self-heating substances and mixtures : Not classified Substances and mixtures which, in contact with water, emit flammable gases : Not classified

GHS Label: X, C, W



Pictograms or symbols:

Warning word: **Danger**

Hazard information	Description of precaution
May intensify fire; oxidizer Causes skin irritation Causes serious eye irritation Suspected of causing cancer May damage fertility or the unborn child Causes damage to organs(nervous system, cardiovascular system, kidney) Causes damage to organs through prolonged or repeated exposure (cardiovascular system, nervous system, kidney)	Obtain special instructions. Read and understand all safety precautions before handling. Keep away from heat/sparks/open flames/hot surfaces. - No smoking. Wear protective gloves/protective clothing/eye protection/respiratory protection/face protection during handling. Avoid breathing dust/mist/gas/fume/vapor/spray. Do not eat, drink or smoke when using this product, and wash hands thoroughly after handling. Take off the contaminated clothing and wash before reuse. IN CASE OF FIRE: Wear protective gloves/eye protection/face protection. Use 《refer to our SDS》 to extinguish. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. IF ON SKIN: Remove immediately all contaminated clothing and rinse skin with water/shower. Then wash skin with plenty of soap and water. If skin irritation occurs, get medical advice/attention. Call a POISON CENTER or doctor/physician if you feel unwell. Store locked up.



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Store away from heat and combustible materials. Take any precaution to avoid mixing with combustible materials.
Dispose of contents/ container in accordance with local/national regulations.

Section 3. Composition / information on ingredients

Chemical or common name: Lead(IV) oxide / Lead dioxide
 Chemical formula: PbO₂
 Single Substance or Compound: Single substance
 Composition: 100%
 CAS #: 1309-60-0
 RTECS#: OG0700000
 TSCA inventory : listed
 EINECS: 2151745

Section 4. First aid measures

Eye contact: Promptly wash eyes with plenty of water while lifting the eye lids.
 Continue to rinse for at least 15 minutes and get medical attention.
 Skin contact: Promptly flush contaminated skin with soap or mild detergent and water.
 Contact physician if irritation continues.
 Inhalation: Remove the exposed person immediately and provide fresh air.
 Get medical attention.
 Ingestion: Rinse mouth and throat with water. Get medical attention immediately.

Section 5. Fire fighting measures

Extinguishing media: Water fog or foam, Perlite ,dry sand.
 Do not use carbon dioxide or dry chemicals.
 Fire fighting: The product is not combustible but enhances combustion of other substances.
 Self-contained breathing apparatus and full protective clothing should be used, if the material is involved in fire.
 In case of fire, the product may liberate toxic gases/ fume.
 For small fires, use only water. Powder and foam extinguishing agents are not suitable.

Section 6. Accidental release measures

Personal Precautions:
 Workers should use protective wears to prevent contact with the spilt adhesive and inhalation of its vapor/dusts.
 Environmental hazard precautions:
 Shut off leak if without risk.
 Prevent flow out to river, etc. so as not to badly affect.
 Method for containment and cleaning up:
 Avoid unnecessary contacts with spills.
 Remove combustible materials and all sources of ignition.
 Indoor leakage: Ventilate as much as possible until the cleaning is completed.
 Outdoor leakage: Work from the windward and evacuate the leeward crowd.
 Gather up, pack in closed DOT-approved waste container as much as possible.
 Carefully collect remnant and move to a safe place.

Section 7. Handling and storage

Precautions to be taken in handling:



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Safe handling: Use protective wears and local ventilation equipment, if inhalation or skin contact is foreseen.
 Avoid prolonged or repeated exposure.
 Use explosion-proof electrical/ventilating/lighting equipment.

Precautions to be taken in storage:

General precautions: Store the material in a sealed container.
 Store the material in a sealed container, or in the original container under dry inert atmosphere.
 Store in a cool, dry, well ventilated and dark place away from incompatible materials.
 Keep away from any heat, sparks, and flames.

Section 8. Exposure controls / personal protection

Exposure guideline:

Chemical Name	ACGIH(2023)		OSHA(2006)
	TLV-TWA mg/m ³	TLV-STEL mg/m ³	PEL-TWA mg/m ³
Lead inorganic compounds (as Pb)	0.05	—	0.05

Facility measures: Local ventilation of closed work room or total proper ventilation to prevent inhalation.

Protective ware: Wear appropriate NIOSH/MSHA-approved respirator, safety goggles, face shields, protective gloves

Section 9. Physical and chemical properties

Color and Form: Brown solid, Tetragonal crystal
 Chemical formula: PbO₂
 Formula weight: 239.2
 Melting point: 290 °C (decomposes)
 Boiling point: No data available
 Density: 9.64 g/cm³
 Solubility in water: Insoluble
 Soluble in: Dilute hydrochloric acid
 Flammability: Non-combustible substance
 Oxidation: Oxidizing substance

Section10. Stability and reactivity

Stability: Stable in a (sealed) dry atmosphere under room temperature.
 Reactivity
 Incompatibility: Metal powder, reducing agent, flammable substance
 Condition to avoid ; No data available

Section11. Toxicological information

Acute toxicity(oral): GHS : No data available
 Skin corrosive / irritation: GHS : Category 2 ; Causes skin irritation
 Serious eye damage / irritation: GHS : Category 2A ; Causes serious eye irritation
 Respiratory sensitization: GHS : No data available
 Skin sensitization: GHS : No data available
 Germ cell mutagenicity: GHS : No data available
 Carcinogenicity: GHS : Category 2 ; Suspected of causing cancer



Carcinogenicity:

Chemical Name	ACGIH (2023)	IARC (2022)	NTP (2021)
Lead compounds	A3	2A	R

ACGIH A3 Confirmed animal carcinogen with unknown relevance to humans.

IARC 2A The agent is probably carcinogenic to humans.

NTP R Reasonably anticipated to be human carcinogens.

Reproductive toxicity:

GHS : Category 1A ; May damage fertility or the unborn child

Specific target organ toxicity

GHS : Category 1 ; Causes damage to organs. (nervous system, cardiovascular system, kidney)

– single exposure:

– repeated exposure:

GHS : Category 1 ; Causes damage to organ through prolonged or repeated exposure. (cardiovascular system, nervous system, kidney)

Aspiration hazard:

GHS : No data available

Section 12. Ecological information

Ecotoxicity:

Hazardous to the aquatic environment

short-term (acute) hazard : GHS : No data available

long-term (chronic) hazard : GHS : No data available

Hazardous to the ozone layer

GHS : No data available

No Freon or Halon

Fish toxicity:

No data available

Degradability:

No data available

Bioaccumulative potential:

No data available

Mobility in soil:

No data available

Section 13. Disposal considerations

Disposal method: User of the product should contract with the local government or licensed 'Industrial Waste Haulers' for disposal of waste.

Section 14. Transport information

UN number: 1872

IATA shipping name: LEAD DIOXIDE

IATA classification: Class 5.1 (Oxidizer)

IATA packing group: III

HS code: 2824.90

Marine pollution: None

Section 15. Regulatory information

TSCA inventory: listed.

Please refer to any other local / national measures that may be relevant.

Section 16. Other information

This SDS is for provision of information, and it does not represent a guarantee the properties or safeties of the product.

The information herein is based on the references we could obtained and the present state of our knowledge, however, this SDS does not always cover all information about the product. Some new information or amendments may be added afterwards.



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Prior to use, please investigate the laws and regulations of the organization, area and country where the product is to be used. The information is intended to ordinary usage, in case of special handling, sufficient care should be taken.



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