Date of issue: 2017/09/12
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Safety Data Sheet

Section 1. Identification of the substance/mixture and of the company/undertaking

Product identifier:
Product name: Lead,powder
SDS No. : 43961E-3
Recommended use of the chemical and restrictions on use
Research and Development
Details of the supplier of the safety data sheet
Manufacturer/Supplier: KISHIDA CHEMICAL CO., LTD.
Address: 3-1, Honmachibashi, Chuo-ku, Osaka, JAPAN
Division: Chemical Safety Management Department
Telephone number: +81-6-6946-8061
FAX: +81-6-6946-1607

Section 2. Hazards identification

Classification of the substance or mixture
HEALTH HAZARDS
Germ cell mutagenicity: Category 2
Carcinogenicity: Category 2
Reproductive toxicity: Category 1A
Specific target organ toxicity - repeated exposure: Category 1 (hematopoietic system, cardiovascular system, immune system, central nervous system, peripheral nervous system, kidneys)
ENVIRONMENT HAZARDS
Hazardous to the aquatic environment, short-term (acute): Category 1
Hazardous to the aquatic environment, long-term (chronic): Category 1
(Note) GHS classification without description: Not classified/Classification not possible
Label elements
Hazard pictograms:

Signal word: Danger
Hazard statements
H341 Suspected of causing genetic defects
H351 Suspected of causing cancer
H360 May damage fertility or the unborn child
H372 Causes damage to organs through prolonged or repeated exposure (hematopoietic system, cardiovascular system, immune system, central nervous system, peripheral nervous system, kidneys)
H410 Very toxic to aquatic life with long lasting effects
Precautionary statements
Prevention
P203 Obtain, read and follow all safety instructions before use.
P273 Avoid release to the environment.

P260 Do not breathe dust/fume/gas/mist/vapors/spray.
P264 Wash hands thoroughly after handling.
P280 Wear protective gloves/protective clothing/eye protection/face protection.
P270 Do not eat, drink or smoke when using this product.

Response

P391 Collect spillage.
P318 IF exposed or concerned, get medical advice.
P319 Get medical help if you feel unwell.

Storage

P405 Store locked up.

Disposal

P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

Specific danger/hazard

Health hazard

See "11. Toxicological Information".

Section 3. Composition/information on ingredients

Substance/mixture:

Substance

Ingredient name	Content (%)	CAS RN	ENCS	Chemical formula
Lead	≧99	7439-92-1	-	Pb

Note : The figures shown above are not the specifications of the product.

Section 4. First aid measures

Descriptions of first aid measures

General measures

IF exposed or concerned, get medical advice.
Get medical help if you feel unwell.

IF INHALED

IF INHALED: Remove person to fresh air and keep comfortable for breathing.
Get medical help if you feel unwell.

IF ON SKIN

IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse affected areas with water or shower.
If skin irritation or rash occurs: Get medical help.

IF IN EYES

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical help.

IF SWALLOWED

Rinse mouth.
IF SWALLOWED: Get medical help if you feel unwell.

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media

Use appropriate extinguishing media suitable for surrounding facilities.

Unsuitable extinguishing media

Unsuitable extinguishing media data is not available.

Specific hazards arising from the substance or mixture

Fire may produce irritating, corrosive and/or toxic gases.
Runoff from fire control or dilution water may cause pollution.
See "10.Stability and Reactivity".

Advice for firefighters

Special extinguishing method

Evacuate non-essential personnel to safe area.

Special protective equipment and precautions for fire-fighters

Wear fire resistant or flame retardant clothing.
Wear protective gloves/protective clothing/eye protection/face protection.
Firefighters should wear self-contained breathing apparatus with a full facepiece operated in the positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

Keep unauthorized personnel away.
Ventilate area until material pick up is complete.
Wear proper protective equipment.

Environmental precautions

Prevent spills from entering sewers, watercourses, low areas or rivers. To be careful not discharged to the environment without being properly handled waste water contaminated.

Methods and materials for containment and cleaning up

Liquid: Absorb spill with inert material (dry sand, earth, et al), then place in a chemical waste container.
Solid: Sweep up, place in a bag and hold for waste disposal.

Preventive measures for secondary accident

Collect spillage.

Section 7. Handling and storage

Precautions for safe handling

Engineering measures

(Measures to prevent operator exposure)

Do not breathe dust/fume/gas/mist/vapors/spray.

(Measures to prevent fire and explosion)

Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

(Local ventilation/general ventilation)

Exhaust/ventilator should be available.

(Precautions)

Avoid contact with skin.
Avoid contact with eyes.

Advice on safe handling

Obtain, read and follow all safety instructions before use.
Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands and contaminated parts thoroughly after handling.
When using do not eat, drink or smoke.

Avoidance of contact

See Section 10: Stability and Reactivity.

Advice on general occupational hygiene

Wash hands thoroughly after handling.
Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Conditions for safe storage

Keep container tightly closed.
Store locked up. (P405)
Store in a cool, dry place. Do not store in direct sunlight.
Storage in accordance with local/national regulation.

Safe packaging material

Use closed unbreakable containers.

Section 8. Exposure controls/personal protection

Control parameters

Permissible concentration

Administrative Control Levels and Concentration standard value

Japan control value 0.05mg-Pb/m3

Occupational exposure limit values

The Japan Society for Occupational Health

0.03mg-Pb/m3

ACGIH

TWA: 0.05mg-Pb/m3 (CNS & PNS impair; hematologic eff)

Appropriate engineering controls

Do not use in areas without adequate ventilation.
Eye wash station should be available.
Washing facilities should be available.

Individual protection measures, such as personal protective equipment

Recommend to use protective equipment in conformity with the standards.
Use appropriate protective equipment in accordance with local/national regulation.

Respiratory protection

Wear respiratory protection (dust-proof mask/gas mask). Select chemical cartridge corresponding to type of gases when using a gas mask.

Hand protection

Wear impervious protective glove.

Eye/face protection

Wear eye/face protection. Wear safety goggles in cases gas is generated.

Skin and body protection

Wear protective clothing.

Section 9. Physical and Chemical Properties

Physical state: Powder

Color: Gray-blue, silver-white to black
Odor: Odorless
Melting point/Freezing point: 327.5℃
Boiling point or initial boiling point and boiling range: (Lead)1740℃
Flammability data is not available.
Lower and upper explosion limit/flammability limit data is not available.
Flash point data is not available.
Auto-ignition temperature data is not available.
Decomposition temperature data is not available.
pH data is not available.
Kinematic viscosity data is not available.
Solubility:
Solubility in water: Practically insoluble
Solubility in solvent data is not available.
Partition coefficient n-octanol/water data is not available.
Vapor pressure data is not available.
Density and/or relative density: 11.34 g/cm3
Relative vapor density (Air=1) data is not available.
Particle characteristics data is not available.
Other information
Other information is not available.

Section 10. Stability and Reactivity

Reactivity
Not available.
Chemical stability
Stable under normal storage/handling conditions.
Possibility of hazardous reactions
Upon heating, toxic fumes are formed. Reacts with strong oxidants and strong acids. This generates toxic, fire and explosion hazard. (ICSC 0052)
Conditions to avoid
Contact with incompatible materials.
Contact with fire source.
Incompatible materials
Strong acids, Strong oxidizing agents
Hazardous decomposition products
Lead compounds

Section 11. Toxicological Information

Information on toxicological effects
Acute toxicity data is not available.
Skin corrosion/irritation data is not available.
Serious eye damage/irritation data is not available.
Allergenic and sensitizing effects data is not available.
Germ cell mutagenicity
[Product]
Category 2, Suspected of causing genetic defects
[Data for components of the product]

[NITE-CHRIP]
Category 2 (source: NITE)

Carcinogenicity

[Product]
Category 2, Suspected of causing cancer

[Data for components of the product]
[NITE-CHRIP]
Category 2 (source: NITE)
[IARC]
Group 2B : Possibly carcinogenic to humans
[ACGIH]
A3(as Pb): Confirmed Animal Carcinogen with Unknown Relevance to Humans
[JSOH]
Group 2B: The agents which are probably or possibly carcinogenic to humans
[NTP]
RAHC : Reasonably Anticipated to be Human Carcinogens

Reproductive toxicity

[Product]
Category 1A, May damage fertility or the unborn child

[Data for components of the product]
[NITE-CHRIP]
Category 1A (source: NITE)

Specific target organ toxicity - single exposure data is not available.

Specific target organ toxicity - repeated exposure

[Product]
Category 1, Causes damage to organs through prolonged or repeated exposure

[Data for components of the product]
[NITE-CHRIP]
Category 1 (hematopoietic system, cardiovascular system, immune system, central nervous system, peripheral nervous system, kidneys) (source: NITE)

Aspiration hazard data is not available.

Information on other hazards

May cause lung disorders by massive inhalation of powdered substance.
-e.g. fibrosis of lung tissue, cough, sputum, breath shortness, dyspnea, decline of lung function, interstitial lung disease, pneumothorax

Section 12. Ecological Information

Toxicity

Aquatic toxicity

[Product]
Category 1, Very toxic to aquatic life
Category 1, Very toxic to aquatic life with long lasting effects

[Data for components of the product]
Hazardous to the aquatic environment, short-term (acute)
[NITE-CHRIP]
Fish (Pimephales promelas) 96-hour LC50: 0.0408 mg Pb/L (test substance: PbN_2O_6 (CAS RN: 10099-74-8)) (source: NITE)
Crustacea (Ceriodaphnia dubia) 48-hour EC50: 0.026 mg Pb/L (test substance: PbN_2O_6 (CAS RN: 10099-74-8)) (source: NITE)

Algae (Raphidocelis subcapitata) 72-hour EC50: 0.0205 mg Pb/L (test substance: PbCl2 (CAS RN: 7758-95-4)) (source: NITE)

Hazardous to the aquatic environment, long-term (chronic)

[NITE-CHRIP]

Fish (Oncorhynchus mykiss) 62-day NOEC: 0.008 mg Pb/L (test substance: PbCl2 (CAS RN: 7758-95-4)) (source: NITE)

Crustacea (Ceriodaphnia dubia) 7-day EC10: 0.017 mg Pb/L (test substance: PbN2O6 (CAS RN: 10099-74-8)) (source: NITE)

Algae (Raphidocelis subcapitata) 72-hour EC10: 0.0061 mg Pb/L (test substance: PbN2O6 (CAS RN: 10099-74-8)) (source: NITE)

Water solubility

practically insoluble (source: ICSC, 2019)

Persistence and degradability

Persistence and degradability data is not available.

Bioaccumulative potential

Bioaccumulative potential data is not available.

Mobility in soil

Mobility in soil data is not available.

Other adverse effects

Ozone depleting chemical data is not available.

Section 13. Disposal considerations

Waste treatment methods

Waste from residues

Avoid release to the environment.

Dispose of contents/container as industrial waste. Accordance with local/national regulation.

Section 14. Transport Information

UNRTDG

UN number : UN3077

UN Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport hazard class(es) : 9

Packing group : III

IMDG Code (International Maritime Dangerous Goods Regulations)

UN number : UN3077

UN Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport hazard class(es) : 9

Packing group : III

IATA (Dangerous Goods Regulations)

UN number : UN3077

UN Proper Shipping Name : ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S.

Transport hazard class(es) : 9

Hazard labels : Miscellaneous & Environmentally hazardous

Packing group : III

Environmental hazards

Marine pollutants (yes/no) : yes

Environmentally hazardous substance/mixture (yes/no) : yes

ERG GUIDE No.: 171

Section 15. Regulatory Information

Safety, health and environmental regulations/legislation specific for the substance or mixture

U.S. Toxic Substances Control Act (TSCA) Inventory

Chemicals listed in TSCA Inventory

Applicable

Other regulatory information

Ensure this material in compliance with federal requirements and ensure conformity to local regulations.

Section 16. Other information

References and sources for data

Globally Harmonized System of classification and labelling of chemicals, UN
Recommendations on the TRANSPORT OF DANGEROUS GOODS 23rd edit., 2023 UN
IMDG Code, 2024 Edition (Incorporating Amendment 42-24)
IATA Dangerous Goods Regulations (67th Edition) 2026
2024 EMERGENCY RESPONSE GUIDEBOOK (US DOT)
2026 TLVs and BEIs. (ACGIH)
JIS Z 7252 : 2025
JIS Z 7253 : 2025
Recommendation of occupational exposure limits (2024-2025) (JSOH)
Supplier's data/information

General Disclaimer

Please provide SDS to customers for selling or transferring.
All chemicals have unknown hazard. Handle the product with care.
This data sheet was created based on the information we currently have and may be revised according to new information. In addition, the precautions apply only to normal handling, and in the case of special handling, please make adequate countermeasure to maintain your safety.
The data given here is based on current knowledge and experience. The purpose of this Safety Data Sheet is to describe the products in terms of their safety requirements. The data does not signify any warranty with regard to the products' properties.
The GHS classification data given here is based on current Data published in Japan (National Institute of Technology and Evaluation (NITE) Chemical Risk Information Platform (NITE-CHRIP), up to FY2024).