
Safety Data Sheet**1. Chemical product and company identification****Product name** : Lead(II) nitrate**SDS code** : B5-07**Company/undertaking identification** :

HAYASHI PURE CHEMICAL IND.,LTD.

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URL : <https://www.hpc-j.co.jp/>**Emergency number** : 06-6910-7305**Recommended use** : For research and experimental use only.**Restrictions on use** : Do not use on a human body or for animal medicines, foods, household products, cosmetics, etc.**2. Hazards identification****GHS classification**

Physical hazards	Explosives	No classification	
	Flammable gases	No classification	
	Aerosol	No classification	
	Oxidizing gases	No classification	
	Gases under pressure	No classification	
	Flammable liquids	No classification	
	Flammable solids	No classification	
	Self-reactive substances and mixtures	No classification	
	Pyrophoric liquids	No classification	
	Pyrophoric solids	No classification	
	Self-heating substances and mixtures	No classification	
	Substances and mixtures which in contact with water emit flammable gases	No classification	
	Oxidizing liquids	No classification	
	Oxidizing solids	Category 2	
	Organic peroxides	No classification	
	Corrosive to metals	classification not possible	
	Desensitized explosives	classification not possible	
	Health hazards	Acute toxicity (oral)	classification not possible
		Acute toxicity (dermal)	classification not possible
		Acute toxicity (inhalation:gas)	No classification
Acute toxicity (inhalation:vapors)		classification not possible	
Acute toxicity (inhalation:dust/mist)		classification not possible	
Skin corrosion/irritation		Category 2	
Serious eye damage/eye irritation		Category 2A	
Respiratory sensitization		classification not possible	
Skin sensitization		classification not possible	
Germ cell mutagenicity		Category 2	
Carcinogenicity	Category 2		
Reproductive toxicity	Category 1A		
Specific target organ toxicity (single exposure)	Category 1 (blood system, kidneys, nervous system)		

	Specific target organ toxicity (repeated exposure)	Category 1 (blood system, kidneys, nervous system)
	Aspiration hazard	classification not possible
Environmental hazards	Hazardous to the aquatic environment, short-term (acute)	Category 1
	Hazardous to the aquatic environment, long-term (chronic)	Category 1
	Hazardous to the ozone layer	classification not possible

Hazard pictograms (GHS JP)



GHS03



GHS07



GHS08



GHS09

Signal word (GHS JP)

: Danger

Hazard statements (GHS JP)

: May intensify fire; oxidizer (H272)
 Causes skin irritation (H315)
 Causes serious eye irritation (H319)
 Suspected of causing genetic defects (H341)
 Suspected of causing cancer (H351)
 May damage fertility or the unborn child (H360)
 Causes damage to organs (blood system, kidneys, nervous system) (H370)
 Causes damage to organs (blood system, kidneys, nervous system) through prolonged or repeated exposure (H372)
 Very toxic to aquatic life with long lasting effects (H410)

Precautionary statements (GHS JP)

Prevention

: Obtain special instructions before use. (P201)
 Do not handle until all safety precautions have been read and understood. (P202)
 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. (P210)
 Keep away from clothing and other combustible materials. (P220)
 Do not breathe dust/fume/gas/mist/vapors/spray. (P260)
 Wash hands, forearms and face thoroughly after handling. (P264)
 Do not eat, drink or smoke when using this product. (P270)
 Avoid release to the environment. (P273)
 Wear protective gloves/protective clothing/eye protection/face protection. (P280)

Response

: IF ON SKIN: Wash with plenty of water. (P302+P352)
 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. (P305+P351+P338)
 IF exposed or concerned: Call a POISON CENTER or doctor. (P308+P311)
 Get medical advice/attention if you feel unwell. (P314)
 If skin irritation occurs: Get medical advice/attention. (P332+P313)
 If eye irritation persists: Get medical advice/attention. (P337+P313)
 Take off contaminated clothing and wash it before reuse. (P362+P364)
 In case of fire: Use specify appropriate media to extinguish. (P370+P378)
 Collect spillage. (P391)

Storage

: Store locked up. (P405)

Disposal

: Dispose of contents/container to hazardous or special waste collection point, in accordance with local, regional, national and/or international regulation. (P501)

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Name	Concentration or Concentration range	Formula	Kanpo number		CAS RN
			CSCL no	ISHL no	
Lead(II) nitrate	≥99%, ≤100%	Pb(NO ₃) ₂	(1)-488	Existing Chemical Substance	10099-74-8

The above concentration or concentration range are not product specification.
All percentages listed in the above concentration or concentration range are wt%, unless otherwise specified.

4. First aid measures

First aid measures

- First-aid measures after inhalation : Remove person to fresh air and keep comfortable for breathing.
Get immediate medical advice/attention.
- First-aid measures after skin contact : Remove/Take off immediately all contaminated clothing.
Gently wash with plenty of soap and water.
Get immediate medical advice/attention.
- First-aid measures after eye contact : IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
Get immediate medical advice/attention.
- First-aid measures after ingestion : Rinse mouth.
Get immediate medical advice/attention.

5. Fire fighting measures

- Suitable extinguishing media : Water spray
- Unsuitable extinguishing media : Foam, Dry powder, Do not use a heavy water stream.
- Fire hazard : This product is unburnable.
May intensify fire; oxidizer.
- Explosion hazard : May induce explosion of containers by heating.
- Hazardous decomposition products in case of fire : In case of fire, product may produce irritative or toxic fumes/gases.
- Firefighting instructions : If ignited, for the initial fire-fighting, cut off combustion sources, extinguish fire at a stroke using appropriate fire-extinguishers.
In the case of peripheral fire, quickly remove movable containers to safe places.
If unable to be moved containers, sprinkle water to containers and surrounding equipment, etc. to cool.
Avoid (reject) fire-fighting water to enter environment.
Even after extinguishing fire, thoroughly cool containers by using plenty of water.
- Protection during firefighting : Wear appropriate fire-resistant clothing including self contained-compressed air breathing apparatus.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

- General measures : Before entering, ventilate the area.
Do not let unauthorized persons come close to the area.
Immediately place the leakage area in isolation, with taking proper distances for all directions.
Wear appropriate personal protective devices to prevent inhalation and contact with eye, skin, and clothing, and never attempt to work on the lee.

Environmental precautions

- Environmental precautions : Avoid release to the environment.
Prevent entry to sewers and public waters.

Methods and Equipment for Containment and Cleaning up

- Methods for cleaning up : Take care not to generate dust, sweep it up as much as possible, collect it in an empty container that can be sealed, and move it to a safe place.
Wash out the spilled area with large amounts of water.

7. Handling and storage**Handling**

- Technical measures : Work with appropriate personal protective equipment to prevent inhalation or contact to eyes, skin, and clothing.
Handle with care to prevent leakage, overflowing, or scattering, minimize generation of mist or vapor, and thoroughly ventilate.
- Precautions for safe handling : Do not eat, drink or smoke when using this product.
Thoroughly wash your hands and gargle after handling.
Ensure good ventilation of the work station.
Do not contact, breathe or swallow.
- Prevents handling of incompatible substances or mixtures : Avoid prolonged or repeated exposure.

Storage

- Storage conditions : Store locked up.
Store in a well-ventilated place, away from direct sunlight. Keep container tightly closed and keep away from fire and heat sources.
- Material used in packaging/containers : Airtight container.
- Technical measures : Comply with applicable regulations.
- Storage temperature : Cool and dark place

8. Exposure controls / Personal protection equipment

Exposure limit values	
Lead(II) nitrate	
Japan administration level	0.05mg/m ³ (as Pb)
Exposure limits (JSOH)	0.03mg/m ³ (as Pb, except Alkyllead compounds)
Exposure limits (ACGIH)	TWA 0.05 mg/m ³ ,STEL - (as Pb)

- Appropriate engineering controls : Cover up tightly the generation source at the handling place or install local exhaust equipment or overall ventilation equipment. Install safety showers and eye-fountains near a handling place. Clearly indicate the location.

Protective equipment

- Respiratory protection : Dustproof mask
- Hand protection : Protective gloves
- Eye protection : Protective glasses (general glasses, glasses with side-shields, goggles)
- Skin and body protection : Protective clothing, Protective boots, Protective apron

9. Physical and chemical properties

- Physical state : Solid
- Appearance : Crystals ~ Crystalline powder
- Color : white
- Odor : Odorless
- pH : No data available
- Melting point : No data available
- Freezing point : No data available
- Boiling point : No data available
- Flash point : No data available
- Auto-ignition temperature : No data available
- Decomposition temperature : 470 °C
- Flammability (solid, gas) : No data available
- Vapor pressure : No data available
- Relative density : No data available

Density	: 4.53 g/cm ³ (20°C)
Relative gas density	: No data available
Solubility	: Easily soluble in water. Sparingly soluble in ethanol.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Explosive limits (vol %)	: No data available
Viscosity, kinematic	: No data available
Particle characteristics	: No data available

10. Stability and reactivity

Reactivity	: No data available
Chemical stability	: Stable under normal handling conditions.
Possibility of hazardous reactions	: Be strong oxidizing agent, reacts violently with combustible substances and reducing agents. Reacts violently with ammonium thiocyanate, glowing carbon and lead hypophosphate.
Conditions to avoid	: Sunlight, heat. Ignition sources such as spark, flame and static electricity. Contact with combustible substances, reducing agents, ammonium thiocyanate, glowing carbon and lead hypophosphate.
Incompatible materials	: Combustible substances, Reducing agents, Ammonium thiocyanate, Glowing carbon, Lead hypophosphate
Hazardous decomposition products	: Nitrogen oxides, Lead compounds

11. Toxicological information

The information in this section is based on the "GHS Classification Results" by NITE.

Lead(II) nitrate	
Acute toxicity (oral)	classification not possible
Acute toxicity (dermal)	classification not possible
Acute toxicity (gas)	No classification
Acute toxicity (vapour)	classification not possible
Acute toxicity (inhalation:dust/mist)	classification not possible
Skin corrosion/irritation	Category 2
Serious eye damage/irritation	Category 2A
Respiratory sensitization	classification not possible
Skin sensitization	classification not possible
Germ cell mutagenicity	Category 2
Carcinogenicity	Category 2
Reproductive toxicity	Category 1A
STOT-single exposure	Category 1
STOT-repeated exposure	Category 1
Aspiration hazard	classification not possible

12. Ecological information

The information in this section is based on the "GHS Classification Results" by NITE.

Lead(II) nitrate	
Hazardous to Aquatic Environment - Acute Hazard	Category 1
Hazardous to Aquatic Environment - Chronic Hazard	Category 1
Persistence and degradability	No data available
Bioaccumulative potential	No data available
Mobility in soil	No data available
Hazardous to the ozone layer	No data available

13. Disposal considerations

- Ecology - waste materials : With the detail information of the waste, subcontract its disposal to a waste disposer authorized by a Prefectural Governor.
- Contaminated container and packaging : Empty the packaging completely prior to disposal.
Empty containers should be taken for recycle, recovery or waste in accordance with local regulation.

14. Transport information

International Regulations

Transport by sea(IMDG)

- UN-No. (IMDG) : 1469
- Proper Shipping Name (IMDG) : LEAD NITRATE
- Packing group (IMDG) : II
- Transport hazard class(es) (IMDG) : 5.1 (6.1)
- Hazard labels (IMDG) : 5.1,6.1
- Class (IMDG) : 5.1
- Subsidiary hazard (IMDG) : 6.1
- Division (IMDG) : 5.1
- Limited quantities (IMDG) : 1 kg
- Excepted quantities (IMDG) : E2
- Packing instructions (IMDG) : P002
- IBC packing instructions (IMDG) : IBC08
- IBC special provisions (IMDG) : B21, B4
- Tank instructions (IMDG) : T3, BK2
- Tank special provisions (IMDG) : TP33
- Stowage category (IMDG) : A
- Properties and observations (IMDG) : White crystals. Soluble in water. Mixtures with combustible material are readily ignited and may burn fiercely. Toxic if swallowed, by skin contact or by dust inhalation.
- MFAG-No : 141

Air transport(IATA)

- UN-No. (IATA) : 1469
- Proper Shipping Name (IATA) : Lead nitrate
- Packing group (IATA) : II
- Transport hazard class(es) (IATA) : 5.1 (6.1)
- Hazard labels (IATA) : 5.1, 6.1
- Class (IATA) : 5.1
- Subsidiary hazards (IATA) : 6.1
- Division (IATA) : 5.1
- PCA Excepted quantities (IATA) : E2
- PCA Limited quantities (IATA) : Y543
- PCA limited quantity max net quantity (IATA) : 1kg
- PCA packing instructions (IATA) : 558
- PCA max net quantity (IATA) : 5kg
- CAO packing instructions (IATA) : 562
- CAO max net quantity (IATA) : 25kg
- ERG code (IATA) : 5P

Marine pollutant : Applicable

Regulations in Japan

- Regulatory information by sea : Conform to the provisions of the Ship Safety Law.
- Regulatory information by air : Conform to the provisions of the Civil Aeronautics Law.
- MFAG-No : 141

Special transport precautions : When transporting, load containers so that they do not tip over, damage, drop or collapse. Make sure there is no leak in containers.

15. Regulatory information

National law

- Industrial Safety and Health Law : Working Environment Evaluation Standards, Administrative Control Levels (Law Art.65-2, Para.1)
Harmful Substances Whose Names Are to be Indicated on the Label (Law Art.57, Para.1, Enforcement Order Art.18 Item 1, Item 2, Attached Table No.9)
Notifiable Substances (Law Art.57-2, Enforcement Order Art.18-2)

	Item 1, Item 2, Attached Table No.9)
	Lead and its inorganic compounds (Ordinance number : 411)
	Dangerous Substances - Oxidizing Substance (Enforcement Order Attached Table 1 Item 3)
	Lead compounds (Enforcement Order, Art., Appended Table No.4, Ordinance on Prevention of Lead Poisoning, Art.1, Item 4, MHLW Notification No.91 of 1972)
	Substances on Special medical examination, Current handling workers (Act, Art.66, Para.2, Enforcement Order, Art.22 Item 1)
Japanese Poisonous and Deleterious Substances Control Law	: Deleterious Substances (Designated Order Art.2)
Water Pollution Prevention Law	: Lead compounds
Fire Service Law	: Hazardous Substances (Act, Art.2, Enforcement Order Art.2, Ministerial Ordinance to Provide for Effluent Standards, Art.1)
Air Pollution Control Law	: Nonhazardous material
Law Relating to Prevention of Marine Pollution and Maritime Disasters	: Hazardous substances (Article 2, Paragraph 1, Item 3 of the Law, Article 1 of the Enforcement Ordinance)
Foreign Exchange and Foreign Trade Control Act	: Marine Pollutants for Non-Bulk Shipment (Ordinance Art.30-2-3, MLIT Notification)
Ship Safety Act	: Export Trade Control Ordinance appendix 1-16
Civil Aeronautics Law	: Oxidizing substances and organic peroxides/Oxidizing substances (Dangerous Goods Notification Schedule first second and third Article Dangerous Goods Regulations)
Port Regulation Law	: Oxidizing substances and organic peroxides/Oxidizing substances (Hazardous materials notice Appended Table 1 Article 194 of the Enforcement Regulations)
Waste Management on Public Cleansing Law	: Oxidizing substances and organic peroxides/Oxidizing substances (Article 21, Paragraph 2 of Law, Article 12 rule, notice attached table that defines the type of dangerous goods)
Waterworks Law	: Specially Controlled Industrial Wastes (Act Art.2, para 5, Enforcement Order Art.2-4)
Sewerage Law	: Hazardous Substances (Act Article 4 paragraph 2), Standard for Water Quality (Ministry Order No.101 of 2003)
Japanese Pollutant Release and Transfer Register Law (PRTR Law)	: Substances for Water Quality Standard (Act Art.12-2 Para.2, Enforcement Order Art.9-4)
Labor Standards Act	: Class 1 Designated Chemical Substances, Specified Class 1 Designated Chemical Substances (Act Art.2 para. 2, Enforcement Order Art.1 Appended Table No.1, Enforcement Order Art.4)
Soil Contamination Countermeasures Law	: Lead and its compounds as lead(63%)
	: Chemical Substances Causing Occupational Illnesses (Act Art.75, Para.2, Ordinance Attached Table 1-2, Item 4-1, MHLW Notification No.36 of 1978)
	: Designated Hazardous Substances (Act Art.2 Para.3, Enforcement Order Art.1)

16. Other information

Data sources	: Handbook of 17423 Chemical Products, The Chemical Daily Co, Ltd. International Chemical Safety Cards. National Institute of Technology and Evaluation (NITE). 2020 Emergency Response Guidebook (ERG 2020).
Other information	: The SDS is copyrighted material of Hayashi Pure Chemical Ind, Ltd. This Safety Data Sheet is intended to be provided for business operators who handle chemical substance products of the relevant product and is not intended to assure safety in any way. The Safety Data Sheet does not verify all the information on the applicable chemical substance in the present time. With the recognition in that unknown danger constantly exists in the relevant chemical substance, the product shall be used in the principle of self-responsibility of the user with the highest priority to safety from transport and unpacking to disposal. When the relevant chemical substance is used, the user him/herself shall collect safety information and shall investigate laws and regulations at the place, organizations, countries, etc. where the substance is actually used and give the highest priority to them. The

Company shall take no responsibility for investigating state and local regulations and the user shall handle this problem on his/her own responsibility. In the event that SDS in Japanese and SDS translated into other languages exist, the document described in Japanese is prior to all other documents whether or not there is any difference in contents, and documents in other languages shall be references.