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Safety Data Sheet

1. Chemical product and company identification

Product name : Lithium bromide, anhydrous

Company information

Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, JP
Name of section	:	Business Administration Department, Reagent Division
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@kanto.co.jp
Reference No	:	24234
Recommended use	:	For research use only
Restrictions on use	:	Seek expert judgment when using the product for applications other than those recommended.

2. Hazards identification

GHS classification

Health hazards	Acute toxicity (oral)	Category 4
	Skin sensitization	Category 1B
	Specific target organ toxicity (single exposure)	Category 2 (central nervous system)
	Specific target organ toxicity (repeated exposure)	Category 2 (central nervous system)

Hazard pictograms

Signal word : Warning

Hazard statements : Harmful if swallowed
May cause an allergic skin reaction
May cause damage to organs (central nervous system)
May cause damage to organs (central nervous system) through prolonged or repeated exposure

Precautionary statements

Prevention : Do not breathe dust.
Wash hands, forearms and face thoroughly after handling.
Do not eat, drink or smoke when using this product.
Contaminated work clothing should not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.

Response : IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell.
IF ON SKIN: Wash with plenty of water.
IF exposed or concerned: Call a POISON CENTER or doctor.
Get medical advice/attention if you feel unwell.
Rinse mouth.

If skin irritation or rash occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Storage : Store locked up.

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

3. Composition/information on ingredients

Distinction of substance or mixture : Substance

Chemical name	Concentration (%)	Formula	TSCA	EC-No.	CAS RN
Lithium bromide	≥ 95	BrLi	Listed	231-439-8	7550-35-8

4. First aid measures

First aid measures

First-aid measures after inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

First-aid measures after skin contact : Remove contaminated clothing and the substance. Wash with plenty of water. If skin irritation or rash occurs, get medical attention.

First-aid measures after eye contact : Gently rinse the affected eyes with clean water for at least 15 minutes.

First-aid measures after ingestion : Give the victim water. If necessary, get medical attention.

Personal Protection in First Aid and Measures : Rescuers should wear proper protective equipment like rubber gloves, goggles.

5. Fire fighting measures

Suitable extinguishing media : This product is noncombustible.

Unsuitable extinguishing media : None

Firefighting instructions : Move containers from fire area if it can be done without risk, if not possible, apply water from a safe distance to cool and protect surrounding area.

Personal protection (Emergency response) : Firefighters should wear protective equipment.

6. Accidental release measures

Personal Precautions, Protective Equipment and Emergency Procedures

General measures : Wear proper protective equipment and avoid contact with skin and inhalation of dust. Conduct operations from upwind and evacuate people downwind.

Environmental precautions

Environmental precautions : Attention should be given to avoid discharge of spilled product into rivers and resulting environmental damage. When diluting spill with large amounts of water, discharge of untreated

wastewater into the environment must be avoided.

Methods and Equipment for Containment and Cleaning up

For containment : Sweep up in a chemical waste container. Flush contaminated area with copious amounts of water.

7. Handling and storage

Handling

Technical measures : If necessary, wear proper protective equipment to avoid contact with skin or inhalation of dust.

Precautions for safe handling : Avoid formation of dust and aerosols.

Storage

Storage conditions : Store the bottle tightly closed in a cool, dark place because the substance is hygroscopic.

Material used in packaging/containers : Glass, polyethylene, polypropylene.

8. Exposure controls / Personal protection equipment

ACGIH TWA	Not established

Appropriate engineering controls : Install a local ventilation system in case of dusty condition.

Protective equipment

Respiratory protection : Dust mask

Hand protection : Impervious protective gloves

Eye protection : Safety goggles

Skin and body protection : Protective clothing, protective boots

9. Physical and chemical properties

Physical state : Solid

Color : White

Odor : Odorless

pH : neutral

Melting point : 547 ° C

Freezing point : No data available

Boiling point : 1265 ° C

Flash point : No data available

Auto-ignition temperature : No data available

Decomposition temperature : No data available

Flammability : Non flammable.

Vapor pressure : No data available

Relative density : 3.464 (25/4℃)

Density : No data available

Relative gas density : No data available

Solubility : Water: 143 g/100mL (0℃)
Organic solvent: Soluble in ethanol and ether.

Partition coefficient n- : No data available

octanol/water (log Pow)		
Explosive limits (vol %)	:	No data available
Viscosity, kinematic	:	No data available
Particle characteristics	:	No data available

10. Stability and reactivity

Reactivity	:	May react with oxidizing substances.
Chemical stability	:	Stable under normal conditions. Hydroscopic.
Possibility of hazardous reactions	:	Stable under normal conditions of use.
Conditions to avoid	:	Light, heat, moisture.
Incompatible materials	:	Oxidizing substances.
Hazardous decomposition products	:	Lithium oxide.

11. Toxicological information

Acute toxicity (oral)	:	Harmful if swallowed rat LD50=1383 mg/kg
Acute toxicity (dermal)	:	Classification not possible
Acute toxicity (inhalation)	:	No classification (gas) Classification not possible (vapor) Classification not possible (dust, mist)
Skin corrosion/irritation	:	Classification not possible
Serious eye damage/irritation	:	No classification In an eye irritation study in rabbits (n=4) (OECD TG 405 equivalent, GLP, 16-day observations), effects were completely reversible within 16 days (corneal opacity score: 0.3/0.7/0/2, iritis score: 0/0/0/0, conjunctival redness score: 1/1.7/0.3/2.3, conjunctival edema score: 0.3/0.3/0.3/3.7). Therefore, it was classified as "No classification".
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	May cause an allergic skin reaction In Buehler test (OECD TG 406, GLP, topical administration: stock solution) in guinea pigs (n=10), 40% (4/10) responded to the test. The positive rate at 24 and 48 hours after challenge was 20% (2/10 cases) and 50% (5/10 cases), respectively. The positive rate at 24 and 48 hours after re-challenge was 40% (4/10 cases) (≧15% 1B). Therefore, it was classified as category 1B.
Germ cell mutagenicity	:	Classification not possible Because no in vivo test data available, the classification was not possible. As relevant information, as for in vitro test, the negative data in the Ames test and the chromosomal aberration test using CHL cells were reported.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible In the combined repeated oral dose toxicity study with the reproduction/developmental toxicity screening test in rats (OECD TG422, GLP-compliant), reproductive index containing estrous cycle, copulation index, fertility index, gestation index, implantation index, number of newborn and delivery index were not affected, and no morphological defect in offspring due to test substance were reported. However, data concerning the influence on the development of fetus containing the teratogenicity were insufficient. As such, the substance was classified as "Classification not possible".

STOT-single exposure	:	May cause damage to organs (central nervous system) In the acute oral toxicity study in rats (OECD TG 401, GLP-compliant), as the toxic signs after treatment, decrease of spontaneous activity was observed in most of males in all treatment groups (670 - 2,500 mg/kg) and in all females in groups of 930 mg/kg or more, some of them showed stereotyped behavior immediately after administration, or sedation, incomplete eyelid opening or abnormal gait with time passing after administration. Therefore, it was reported that central nervous system was one of the target organs. Because the dose levels that toxic signs appeared belonged to category 2 defined as the guidance values, the classification was determined as category 2 (central nervous system).
STOT-repeated exposure	:	May cause damage to organs (central nervous system) through prolonged or repeated exposure In the combined repeated oral dose toxicity with reproductive/developmental screening study with rats (OECD TG 422, GLP-compliant), almost all of the animals of the highest dose, 80 mg/kg/day (converted dose level as that of 90-day study: approx. 40 mg/kg/day), for both sexes revealed stereotyped behavior. In addition, it was noticed that this substance may cause impairment to central nervous system by potential toxicity of bromine in human. Because the dose in which stereotyped behavior was shown in rats corresponded to the dose within category 2 defined in the guidance values, the classification was determined as category 2 (central nervous system).
Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	No classification Oryzias latipes LC50>100 mg/L/96h
Aquatic chronic	:	No classification Daphnia magna NOEC=10 mg/L/21-day

Persistence and degradability

No additional information available

Bioaccumulative potential

Low bioconcentration
BCF(lithium) : ≤4 (3 mg/L), ≤31 (0.3 mg/L)
BCF(bromine) : ≤4.3 (3 mg/L), ≤31 (0.3 mg/L)

Mobility in soil

No additional information available

Hazardous to the ozone layer

Ozone	:	Classification not possible

13. Disposal considerations

Ecological waste information	:	Dilute with copious water and adjust the pH to neutral, then flush in drains. Or entrust approved waste disposal companies with the disposal.
Contaminated container and	:	In case of disposal of empty bottles, dispose bottles after

packaging removing the content thoroughly.

14. Transport information

International Regulations

Transport by sea(IMDG)

UN-No. (IMDG)	:	Not applicable
Proper Shipping Name (IMDG)	:	Not applicable
Packing group (IMDG)	:	Not applicable
Transport hazard class(es) (IMDG)	:	Not applicable

Air transport(IATA)

UN-No. (IATA)	:	Not applicable
Proper Shipping Name (IATA)	:	Not applicable
Packing group (IATA)	:	Not applicable
Transport hazard class(es) (IATA)	:	Not applicable
Marine pollutant	:	Not applicable

15. Regulatory information

Regulatory information with regard to this substance in your country or region should be examined by your own responsibility.

16. Other information

Data sources : NITE Chemical Risk Information Platform (NITE-CHRIP), National Institute of Technology and Evaluation.
Encyclopaedia Chimica, Kyoritsu Shuppan Co, Ltd. (1963) .
Handbook of 17625 Chemical Products, The Chemical Daily Co. (2025) .

The information contained herein is based on several references and the present state of our knowledge. However the SDS does not always cover all information about the product, handle the product carefully.The information is intended to ordinary usage, in case of particular handlings, conduct appropriate safety measurements.The information herein is only provision of information, and it does not represent a guarantee the properties of the product.The Safety Data Sheet(SDS) is prepared based on JIS Z7253.