Issue date: 11/12/2003
Revision date: 10/8/2025

Safety Data Sheet

1. Chemical product and company identification

Product name : Lithium sulfate monohydrate

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	:	24140
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

Hazard pictograms

Signal word : Warning

Hazard statements : Harmful if swallowed

Precautionary statements

Prevention	:	Wash hands, forearms and face thoroughly after handling. Do not eat, drink or smoke when using this product.
Response	:	IF SWALLOWED: Call a POISON CENTER or doctor if you feel unwell. Rinse mouth.
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 sulfate monohydrate	≥ 99	Li2O4S・H2O	Listed	233-820-4	10102-25-7

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 : Wash the affected areas under running water.

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 or salt water and make him vomit. 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 : Wear appropriate 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 in a dark, cool place and tightly closed.

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	:	Colorless - white
Odor	:	Odorless
pH	:	4.5 - 8.0 (50 g/L, 20℃)
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	:	130 ° C (lose water of crystallization)
Flammability	:	Non flammable.
Vapor pressure	:	No data available
Relative density	:	No data available
Density	:	2.06 g/cm³ (20℃)
Relative gas density	:	No data available
Solubility	:	Water: 34.6 g/100mL (20℃) Organic solvent: Insoluble 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	:	May react with reducing substances.
Chemical stability	:	Stable under normal conditions.
Possibility of hazardous reactions	:	Stable under normal conditions of use.
Conditions to avoid	:	Light, heat.
Incompatible materials	:	Reducing substances.
Hazardous decomposition	:	Sulfur oxides, lithium oxide.

products

11. Toxicological information

Acute toxicity (oral)	:	Harmful if swallowed rat LD50=613 mg/kg (as Lithium sulfate)
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	:	Classification not possible
Respiratory sensitization	:	Classification not possible
Skin sensitization	:	Classification not possible
Germ cell mutagenicity	:	Classification not possible Lithium sulfate : The classification was not possible because no in vivo test data was available.
Carcinogenicity	:	Classification not possible
Reproductive toxicity	:	Classification not possible Lithium sulfate : No data were available. As information on other lithium compounds, there are numerous reports about Ebstein ‘s anomalies (congenital cardiovascular malformations) in neonates born from mothers who ingested the psychotropic drug containing lithium carbonate as an active ingredient during pregnancy, in addition, it is well known that lithium can pass through the placenta. In the precautions of medicines package insert, lithium is contraindicated in the pregnant or possibly pregnant women. In addition, it is also documented in an insert as a direction for use that lithium is excreted into the mother ‘s milk with a similar concentration in the serum so that suckling should be discontinued when administering to the breastfeeding woman is unavoidably executed.
STOT-single exposure	:	Classification not possible Lithium sulfate : No data were available. As information on other lithium compounds, the therapeutic use of lithium carbonate as an active ingredient of psychotropic drugs might produce unusual toxic response depending on the blood lithium concentrations. According to a medical package insert, it was recommended to monitor the blood lithium concentration as a precaution of usage. Furthermore, it was reported that in patients receiving lithium therapy, severe neurotoxicity might occur which included impaired consciousness, delirium, ataxia, generalized fasciculation and extrapyramidal symptoms when the plasma lithium level would exceed over 2.5 mM, and that the toxicity might occur for a few days from a few hours.
STOT-repeated exposure	:	Classification not possible Lithium sulfate : No data were available. As information on the other lithium compounds, it was reported that the therapeutic use of lithium carbonate as an active ingredient of psychotropic drug may occur side effects such as tremor, lethargy, and confusion. The occurrence of toxicity is related to the blood lithium concentration, and those included neurological toxicity ranging from hand tremor, muscle weakness to coma. In a follow up study about side effects in patients treated with lithium preparation, treatment-related side effects were reported to include tremor, subjective memory loss and loss of creativity. While as side effects other than nervous system, cases with polyuria, polydipsia, or nephrogenic diabetes insipidus were reported, and a possible occurrence of chronic renal failure was also described.

Aspiration hazard	:	Classification not possible

12. Ecological information

Ecotoxicity

Aquatic acute	:	Classification not possible
Aquatic chronic	:	Classification not possible

Persistence and degradability

No additional information available

Bioaccumulative potential

No additional information available

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 packaging	:	In case of disposal of empty bottles, dispose bottles after 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) .

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.