Material Safety Data Sheet

1. Product and company identification

Product name	:	Lithium fluoride
Name of manufacturer	:	KANTO CHEMICAL CO., INC.
Address	:	2-1, Nihonbashi, Muromachi 2-Chome, Chuo-Ku, Tokyo, 103-0022, Japan
Name of section	:	Reagent division, catalog and products information section
Telephone number	:	+81-3-6214-1090
Facsimile number	:	+81-3-3241-1047
Mail address	:	BC32@gms.kanto.co.jp
MSDS No.	:	24126

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Flammable solids	:	Out of category
Pyrophoric solids	:	Out of category
Self-heating substances and mixtures	:	Out of category
Oxidizing solids	:	Out of category

Human health hazard

Acute toxicity(oral)	:	Category 3
Serious eye damage・Eye irritation	:	Category 2A
Carcinogenicity	:	Out of category
Specific target organ systemic toxicity(single exposure)	:	Category 3 (respiratory tract irritation)
Specific target organ systemic toxicity(repeated exposure)	:	Category 1

Pictogram or symbol



Signal word	:	Danger
Hazard statement	:	Toxic if swallowed Causes serious eye irritation May cause respiratory irritation Causes damage to organs (bone) through prolonged or repeated exposure

Cautions

Safety measurements	:	Do not breathe dust, mist, and vapor. Use only in a well-ventilated area. Do not eat, drink or smoke when using this product.

Wear appropriate protective gloves, glasses, clothing, face shield, or mask.

Wash hands thoroughly after handling.

First-aid measures : If inhaled : Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical treatment if you feel unwell.

If swallowed: Induce vomiting, if possible, and rinse mouth. Immediately get medical treatment.

If in eyes : Rinse cautiously with water for several minutes. Get medical treatment.

If on skin : Remove contaminated clothing and the substance. Get medical treatment, if you feel unwell.

Wash hands thoroughly after handling.

Get medical treatment, if you feel unwell.

Storage : Tightly container closed and store in a well-ventilated area.

Store locked up.

Disposal : Dispose of contents and containers appropriately in accordance with related regulations.

3. Composition/Information on ingredients

Substance/Mixture : Substance

Chemical name or commercial name

: Lithium fluoride

Ingredients and composition

: Lithium fluoride min. 98.0%

Chemical formula : LiF

CAS No. : 7789-24-4

TSCA Inventory : Registered

EINECS No. : 2321520

4. First aid measures

Inhalation : Remove the victim to fresh air, and make him blow his nose and gargle.

Skin contact : Wash the affected areas under running water.

Eye contact : Wash the affected areas under running water for at least 15 minutes. If necessary, get medical treatment.

Ingestion : Give the victim milk or 5% calcium gluconate water solution. Get medical treatment.

5. Fire fighting measures

Extinguishing media : This product is noncombustible.

Prohibited extinguishing media

: None

Particular fire fighting : 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.

Protection for firefighters

: Firefighters should wear protective equipment.

6. Accidental release measures

Cautions for personnel : Wear proper equipment and avoid contact with skin and inhalation of dust. Keep away personnel except for authorized ones from spillage area by stretching ropes.

Cautions for environment : Attention should be given not to cause damage to the environment by flowing of spillage to rivers. In case of the dilution of copious water, do not cause damage to the environment by untreated wastewater.

Removal measure : Sweep up in a chemical waste container. Flush residual area with copious amounts of water.

7. Cautions of handling and storage

Handling

Engineering measures : If necessary, wear proper protective equipment not to contact with skin or inhale the dust.

Storage

Adequate storage condition

: Store in a dark, cool place and tightly closed.

Safety adequate container materials

: Glass, polyethylene, polypropylene

8. Exposure control/Personal protection

Engineering measures : Install a local ventilation system under dusty condition.

Control parameters

ACGIH(2009) : 2.5mg/m3(as Fluoride)(TLV-TWA)

Protective equipment

Respiration protective equipment

: If necessary, wear dust mask

Hands protective equipment

: Impervious protective gloves

Eyes protective equipment

: Safety goggles

9. Physical and chemical properties

Appearance	:	Powder
Color	:	White
Odor	:	Odorless
Boiling point	:	1676℃
Melting point	:	842℃
Specific gravity	:	2.64g/ml(20℃)
Solubility		
Solubility in solvents	:	Water ; 0.27%(18℃)
		Organic solvents ; Insoluble in ethanol

10. Stability and reactivity

Stability	:	Decomposes on heat.
Reactivity	:	May react with oxidizing substances.

Incompatible conditions : Light, heat

Incompatible materials : Oxidizing substances

11. Toxicological information

Acute toxicity : Toxic if swallowed(category 3)

Dermal : Not possible to classify because of insufficient data.

Inhalation(vapor) : Not possible to classify because of insufficient data.

Inhalation(dust, mist) : Not possible to classify because of insufficient data.

rat oral LD50=143mg/kg

Skin corrosiveness : Not possible to classify because of insufficient data.

Irritation to skin, eyes : Causes serious eye irritation(category 2A)

-(Empty)-

Respiratory sensitization or Skin sensitization

: Respiratory sensitization : Not possible to classify because of insufficient data.

Skin sensitization : Not possible to classify because of insufficient data.

Mutagenicity : Not possible to classify because of insufficient data.

Carcinogenic effects : Out of category

ACGIH classifies -(Empty)- A4(not classifiable as a human carcinogen)

Effects on the reproductive system

: Not possible to classify because of insufficient data.

Specific target organ systemic toxicity single exposure

: May cause respiratory irritation(category 3)

-(Empty)-

Specific target organ systemic toxicity repeated exposure

: Cause damage to organs (bone) through prolonged or repeated exposure(category 1)

-(Empty)-

Aspiration hazard : Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity : Acute aquatic toxicity : Not possible to classify because of insufficient data.

Chronic aquatic toxicity : Not possible to classify because of insufficient data.

Rediualbility and degradability

: Not available

Ecorediualbility : Not available

13. Disposal consideration

Residual disposal	:	Bury in a landfill site approved for the disposal of chemical and hazardous wastes. Or entrust approved waste disposal companies with the disposal.
Containers	:	In case of disposal of empty bottles, dispose bottles after removing the content thoroughly.

14. Transport information

UN class	:	Class 6.1(Toxic substances) P. G. Ⅲ
UN number	:	3288

Marine regulation information

UN No.	:	3288
Proper shipping name	:	TOXIC SOLID, INORGANIC, N.O.S.
Class	:	6.1
Sub risk	:	-
Packing group	:	Ⅲ

Aviation regulation information

UN No.	:	3288
Proper shipping name	:	Toxic solid, inorganic, n.o.s.
Class	:	6.1
Sub risk	:	-
Packing group	:	Ⅲ

15. Regulatory information

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

16. Other information

References

Encyclopaedia Chemica, Kyoritsu Shuppan Co., Ltd.(1963)

Dangerous Properties of Industrial Materials,6th ed. N.I.Sax Van Nostrand Reinhold Company(1984)

Handbook of 15710 Chemical Products, The Chemical Daily Co.(2010)

The information contained herein is based on several references and the present state of our knowledge. However the MSDS 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.