Safety Data Sheet

1. Product and company identification

Product name	:	Lithium bis(fluorosulfonyl)imide
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
SDS No.	:	24076

2. Summary of danger and Hazard

GHS classification

Physical and chemical hazard

Pyrophoric solids	:	Out of category

Human health hazard

Acute toxicity(oral)	:	Category 3
Acute toxicity(dermal)	:	Out of category
Skin corrosion・Irritation	:	Category 1A
Serious eye damage・Eye irritation	:	Category 1
Reproductive toxicity	:	Category 1A

Environmental hazard

Hazardous to the aquatic environment-acute hazard	:	Category 3
Hazardous to the aquatic environment-chronic hazard	:	Category 3

Pictogram or symbol

Signal word	:	Danger
Hazard statement	:	Toxic if swallowed Causes severe skin burns and eye damage Causes serious eye damage May damage fertility or the unborn child Harmful to aquatic life Harmful to aquatic life with long lasting effects

Cautions

Safety measurements	:	Do not handle until all safety precautions have been read and understood.
		Do not breathe dust and mist.
		Avoid release to the environment.
		Do not eat, drink or smoke when using this product.
		Wear appropriate protective gloves, glasses, clothing, face shield, or mask.
		Wash protective equipment thoroughly after use.
		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. Immediately get medical treatment.
		If exposed or concerned, get medical treatment.
Storage	:	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 bis(fluorosulfonyl)imide
Ingredients and composition	:	Lithium bis(fluorosulfonyl)imide min. 99.5%
Chemical formula	:	(FO2S)2NLi
CAS No.	:	171611-11-3
TSCA Inventory	:	Not registered
EINECS No.	:	-

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. Get medical treatment.
Ingestion	:	Rinse mouth with water. Give the victim one or two glasses of water or milk, do not induce vomiting. Get medical treatment as soon as possible.

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.

Cautions for safety handling
: Handle the chemical not to generate aerosol or dust.

Storage

Adequate storage condition
: Store the bottle tightly closed in a cool, dark place because the substance has hygroscopic property.

Safety adequate container materials
: Polyethylene, polypropylene, fluorine resin

8. Exposure control/Personal protection

Engineering measures : Use only with adequate ventilation and in closed systems.

Control parameters

ACGIH(2009) : Not established

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 : Crystalline powder

Color : White

Odor : Odorless

pH : Not available

Boiling point : Decomposition

Melting point	:	140℃
Flash point	:	Not available
Specific gravity	:	2.32g/mL(20℃)
Solubility		
Solubility in solvents	:	Water ; 25.1%
		Organic solvents ; Soluble in methanol.

10. Stability and reactivity

Stability	:	Stable under normal usage.
Reactivity	:	May react with strong oxidizing substances.
Incompatible conditions	:	Light, heat
Incompatible materials	:	Acid, Oxidizing substances, Alkaline
Hazardous decomposition products		
	:	Nitrogen oxide, Fluoride, Hydrogen fluoride, sulfur oxides.

11. Toxicological information

Acute toxicity	:	Toxic if swallowed(category 3)
		Dermal : Out of category
		Inhalation(vapor) : Not possible to classify because of insufficient data.
		Inhalation(dust, mist) : Not possible to classify because of insufficient data.
		rat oral LD50=50-300mg/kg
		rat skin LD50>2500mg/kg
Skin corrosiveness	:	Causes severe skin burns and eye damage(category 1A)
		Since causes irritation to the skin, it was classified into category 1A.
Irritation to skin, eyes	:	Causes serious eye damage(category 1)
		Since causes severe irritation to the eyes, it was classified into category 1.
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	:	May cause genetic defcts(category 1A)
		Since lithium has been suggested teratogenicity to human, it was classified into category 1.
Carcinogenic effects	:	Not possible to classify because of insufficient data
Effects on the reproductive system		
	:	Not possible to classify because of insufficient data.
Specific target organ systemic toxicity single exposure		
	:	Not possible to classify because of insufficient data.
Specific target organ systemic toxicity repeated exposure		
	:	Not possible to classify because of insufficient data.
Aspiration hazard	:	Not possible to classify because of insufficient data.

12. Ecological information

Ecotoxicity

Fish toxicity	:	Harmful to aquatic life(category 3)
		Harmful to aquatic life with long lasting effects(category 3)
		Daphnia magna EC50=71mg/L/48H
Rediualbility and degradability		
	:	Not available
Ecorediualbility	:	Not available

13. Disposal consideration

Residual disposal	:	Mixed with flammable organic solvents and burn in a chemical incinerator equipped with an afterburner and a scrubber. 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 8(Corrosive substances) P. G. Ⅱ
UN number	:	2923
Marine regulation information		
UN No.	:	2923
Proper shipping name	:	CORROSIVE SOLID, TOXIC, N.O.S.
Class	:	8
Sub risk	:	6.1
Packing group	:	Ⅱ
Marine pollutant	:	Not applicable
Aviation regulation information		
UN No.	:	2923
Proper shipping name	:	Corrosive solid, toxic, n.o.s.
Class	:	8
Sub risk	:	6.1
Packing group	:	Ⅱ

15. Regulatory information

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

16. Other information

References : Dictionary of Organic Compounds, The society of Synthetic Organic Chemistry, Kodansha Ltd.(1985)

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, and it has the same required elements on the Material Safety Data Sheet(MSDS) which is prepared based on JIS Z7250:2010.