

SAFETY DATA SHEET

Date Issued : 5/7/2012
MSDS No : M-2400-170

Lithium Fluoride Pieces

1. PRODUCT AND COMPANY IDENTIFICATION

PRODUCT NAME: Lithium Fluoride Pieces

GENERAL USE: Physical vapor deposition of thin films

MANUFACTURER

Kurt J Lesker Company

United States

1925 Route 51

Jefferson Hills, PA 15025

Customer Service: 412-387-9200

E-Mail: msds@lesker.com

Kurt J Lesker Company LTD

United Kingdom

15-16 Burgess Road

Hastings, East Sussex, TN35 4NR

England

Customer Service: +44 (0) 1424 458100

24 HR. EMERGENCY TELEPHONE NUMBERS

24-Hour Emergency Response provided by
3E Global Incident Response Hotline

When calling, refer to Kurt J Lesker Company
Global Response Access Code: 333594

North America [USA, Canada, Mexico]: 1-866-519-4752

Mainland China: (+86) 4001 2001 74

Europe: {int'l call prefix}-1-760-476-3961

Asia Pacific: {int'l call prefix}-1-760-476-3960

Middle East & Africa: {int'l call prefix}-1-760-476-3959

2. HAZARDS IDENTIFICATION

GHS CLASSIFICATIONS

Health:

Acute Toxicity (Oral), Category 4

Acute Toxicity (Inhalation), Category 4

Eye Irritation, Category 2B

Skin Irritation, Category 2

Target Organ Toxicity (Single exposure), Category 3

GHS LABEL



Exclamation
mark

HAZARD STATEMENTS

H302: Harmful if swallowed.

H332: Harmful if inhaled.

H320: Causes eye irritation.

H315: Causes skin irritation.

H335: May cause respiratory irritation.

PRECAUTIONARY STATEMENT(S)

Prevention:

P280: Wear protective gloves/protective clothing/eye protection/face protection.

P260: Do not breathe dust/fume/gas/mist/vapours/spray.

P264: Wash ... thoroughly after handling.

Response:

P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.

P302+P352: IF ON SKIN: Wash with plenty of soap and water.

P304+P340: IF INHALED: Remove to fresh air and keep at rest in a position comfortable for breathing.

P312: Call a POISON CENTER or doctor/physician if you feel unwell.

EMERGENCY OVERVIEW

PHYSICAL APPEARANCE: White solid

IMMEDIATE CONCERNS: Harmful if swallowed. Harmful if inhaled. Causes skin and eye irritation. Causes respiratory tract irritation.

POTENTIAL HEALTH EFFECTS

EYES: Causes eye irritation.

SKIN: Causes skin irritation.

SKIN ABSORPTION: May be harmful in contact with skin.

INGESTION: Harmful if swallowed. Can burn mouth, throat and stomach.

INHALATION: Harmful if inhaled. Causes respiratory tract irritation.

REPRODUCTIVE TOXICITY

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

CARCINOGENICITY: Not listed as a human carcinogen

MUTAGENICITY: Not Available

ROUTES OF ENTRY: Inhalation, ingestion, eye contact, or skin contact.

IRRITANCY: May cause irritation of skin, eyes, and respiratory tract.

PHYSICAL HAZARDS: This substance is not considered hazardous in the form supplied. Dusts at sufficient concentrations can form explosive mixtures with air.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	Wt. %	CAS
Lithium Fluoride	100	7789-24-4

4. FIRST AID MEASURES

EYES: Immediately flush eyes with plenty of water for at least 15 minutes. Get immediate medical attention.

SKIN: Remove contaminated clothing. Wash with soap and water. Get medical attention immediately.

INGESTION: If swallowed, do NOT induce vomiting. Give victim a glass of water or milk. Call a physician or poison control center immediately. Never give anything by mouth to an unconscious person.

INHALATION: Remove to fresh air. If not breathing, give artificial respiration or give oxygen by trained personnel. Seek immediate medical attention.

SIGNS AND SYMPTOMS OF OVEREXPOSURE

INGESTION: Nausea, vomiting, diarrhea.

CHRONIC EFFECTS: Not Available

5. FIRE FIGHTING MEASURES

FLAMMABLE CLASS: Not flammable.

EXTINGUISHING MEDIA: Use alcohol foam, carbon dioxide, or water spray when fighting fires involving this material.

EXPLOSION HAZARDS: Dusts at sufficient concentrations can form explosive mixtures with air.

FIRE FIGHTING PROCEDURES: As in any fire, wear self-contained breathing apparatus pressure-demand, (MSHA/NIOSH approved or equivalent) and full protective gear.

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen fluoride, Toxic metal fumes

6. ACCIDENTAL RELEASE MEASURES

SMALL SPILL: Clean up spills immediately, observing precautions in Protective Equipment section.

LARGE SPILL: Collect spilled material in appropriate container. Spill may be reportable . Consult section 15 for Reportable Quantities.

ENVIRONMENTAL PRECAUTIONS

WATER SPILL: This material is a water pollutant and should be prevented from contaminating soil or from entering sewage and drainage systems and bodies of water.

GENERAL PROCEDURES: Isolate hazard area. Keep unnecessary and unprotected personnel from entering. Eliminate all ignition sources if safe to do so. Avoid formation of dust. Provide appropriate exhaust ventilation where dust is formed. Avoid breathing (dust, vapor, mist, gas). Practice good chemical hygiene during and after use. Avoid release to the environment.

7. HANDLING AND STORAGE

GENERAL PROCEDURES: To avoid risks to human health and the environment, comply with the instructions for use.

HANDLING: Keep away from heat and flame. Keep container closed when not in use. Remove contaminated clothing and wash before reuse. Wash hands before eating and wash before reuse. Wash thoroughly after handling.

STORAGE: Keep container closed when not in use. Store in a cool dry place.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

ENGINEERING CONTROLS: Use process enclosures, local exhaust ventilation, or other engineering controls to control airborne levels below recommended exposure limits.

PERSONAL PROTECTIVE EQUIPMENT

EYES AND FACE: Wear safety glasses with side shields (or goggles) and a face shield.

SKIN: Wear protective gloves/protective clothing/eye protection/face protection. Wash contaminated clothing before reuse.

RESPIRATORY: If ventilation is inadequate and this material is handled at elevated temperatures or dusts/fumes/mists are generated a NIOSH/MSHA approved air purifying respirator with a manufacturers approved cartridge or canister may be permissible under certain circumstances where airborne concentrations are expected to exceed exposure limits. Protection provided by air purifying respirators is limited. Use a

positive pressure air supplied respirator if there is any potential for an uncontrolled release, exposure levels are not known, or any other circumstances where air purifying respirators may not provide adequate protection.

WORK HYGIENIC PRACTICES: Practice good chemical hygiene during and after use.

COMMENTS:

COMPONENT EXPOSURE LIMITS

Component	Location, Type	Value (mg/m3)
Fluorides	ACGIH TLV TWA	2.5
	OSHA OEL TWA	2.5
	NIOSH REL TWA	2.5
	Canada - AB, BC, ON, PQ TWA	2.5
	Europe TWA	2.5
	Denmark STEL	5
	Germany, Switzerland TWA	1
	Germany, Switzerland STEL	4
	Netherlands, STEL	2
	Poland TWA	2
	Australia, NZ, Singapore TWA	2.5
	UK WEL TWA	2.5

9. PHYSICAL AND CHEMICAL PROPERTIES

PHYSICAL STATE: Solid

ODOR: None

COLOR: White

pH: NA = Not Applicable

PERCENT VOLATILE: NA = Not Applicable

FLASH POINT AND METHOD: NA = Not Applicable

FLAMMABLE LIMITS: NA = Not Applicable

AUTOIGNITION TEMPERATURE: Not Available

VAPOR PRESSURE: NA = Not Applicable

VAPOR DENSITY: NA = Not Applicable

BOILING POINT: 1676°C

MELTING POINT: 845°C

SOLUBILITY IN WATER: .134 g/100mL at 25°C

DENSITY: 2.635 at 25°C

MOLECULAR WEIGHT: 25.939

10. STABILITY AND REACTIVITY

STABLE: Yes

HAZARDOUS POLYMERIZATION: No

HAZARDOUS DECOMPOSITION PRODUCTS: Hydrogen fluoride, Toxic metal fumes

INCOMPATIBLE MATERIALS: Strong acids, Strong bases, Oxidizing materials.

11. TOXICOLOGICAL INFORMATION

ACUTE

DERMAL LD₅₀: Not Available

SKIN ABSORPTION: Not Available

ORAL LD₅₀: Not Available

INHALATION LC₅₀: Not Available

CARCINOGENICITY

IARC: Not listed

NTP: Not listed

OSHA: Not listed

REPRODUCTIVE EFFECTS: Not Available

TERATOGENIC EFFECTS: Not Available

MUTAGENICITY: Not Available

12. ECOLOGICAL INFORMATION

BIOACCUMULATION/ACCUMULATION: Not Available

AQUATIC TOXICITY (ACUTE): Not Available

CHEMICAL FATE INFORMATION: Not Available

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHOD: Dispose of according to applicable federal, state, provincial, and local regulations.

PRODUCT DISPOSAL: Contact a licensed waste disposal company.

EMPTY CONTAINER: Follow all MSDS/label precautions even after container is emptied because it may retain product residues.

14. TRANSPORT INFORMATION

DOT (DEPARTMENT OF TRANSPORTATION)

PROPER SHIPPING NAME: Not Regulated

ROAD AND RAIL (ADR/RID)

PROPER SHIPPING NAME: Not Regulated

AIR (ICAO/IATA)

SHIPPING NAME: Not Regulated

VESSEL (IMO/IMDG)

SHIPPING NAME: Not Regulated

CANADA TRANSPORT OF DANGEROUS GOODS

SHIPPING NAME: Not Regulated

15. REGULATORY INFORMATION

UNITED STATES

SARA TITLE III (SUPERFUND AMENDMENTS AND REAUTHORIZATION ACT)

311/312 HAZARD CATEGORIES: Acute health hazard.

313 REPORTABLE INGREDIENTS: Yes

TSCA (TOXIC SUBSTANCE CONTROL ACT)

TSCA STATUS: All components of this product are included in inventory, exempt, or notified

REGULATIONS

STATE REGULATIONS:

The following components appear in one or more of the following state hazardous substances lists

Component	CAS	CA	MA	MN	NJ	PA	RI
Fluorides	N/A	No	No	No	Yes	No	No

CALIFORNIA PROPOSITION 65: This product is not known to contain any components for which the State of California has found to cause cancer, birth defects or other reproductive harm.

CANADA

WHMIS HAZARD SYMBOL AND CLASSIFICATION



DOMESTIC SUBSTANCE LIST (INVENTORY): All components of this product are included in inventory, exempt, or notified

16. OTHER INFORMATION

APPROVED BY: EHS DEPT

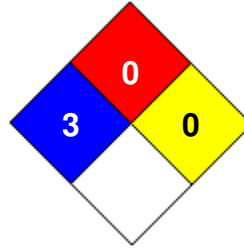
PREPARED BY: E Bolton

INFORMATION CONTACT: msds@lesker.com

HMIS RATING

HEALTH		2
FLAMMABILITY		0
PHYSICAL HAZARD		0
PERSONAL PROTECTION		F

NFPA CODES



MANUFACTURER DISCLAIMER:

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