# SAFETY DATA SHEET

## LITHIUM FLUORIDE OPTICAL CRYSTAL

According to Regulation (EC) No.1907/2006 (REACH)



Revision 2015: Issued 8th September 2015

### 1. IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

1.1. PRODUCT IDENTIFIERS:

Product Name: Lithium Fluoride Optical Crystal

Synonyms, Trade Names:

1.2. RELEVANT IDENTIFIED USES OF THE SUBSTANCE OR MIXTURE AND USES ADVISED AGAINST

Optical Material for manufacture of Optical Components. Identified Uses:

LiF

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

Company: CRYSTRAN LTD, 1 Broom Road Business Park, Poole, Dorset UK BH12 4PA

**\*** +44 1202 307650

1.4. EMERGENCY TELEPHONE NUMBER

2 +44 1202 307650 (Monday to Friday 08:30 to 17:00 GMT) Emergency Phone:

Emergency Action: In the event of a medical enquiry involving this product, please contact your doctor or local hospital accident

and emergency department. The attending health professional will be able to contact the National Poisons

Information Service.

## 2. HAZARDS IDENTIFICATION

#### 2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

Class 6.1 Poison. If swallowed causes nausea, vomiting, stomach pains and diarrhoea. Also harmful in contact with skin. Particular care must be exercised when machining and creating dust or particles.

#### 2.2. LABEL ELEMENTS

Signal Word: Warning H302 Harmful if swallowed H315 Causes skin irritation H319 Causes serious eye irritation H332 Harmful if inhaled

Precautionary Statements:

P262 Do not breathe dust/fume/gas/mist/vapours/spray.

P264 Wash thoroughly after handling.

P270 Do not eat, drink or smoke when handling this product

P301+P310 IF SWALLOWED: Immediately call a poison centre or doctor. Rinse mouth. P304+P312 IF INHALED: Call a poison centre or doctor/physician if you feel unwell.

#### 2.3. OTHER HAZARDS

None

#### COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. SUBSTANCES

Component Name CAS number EC number (EINECS) EU index UN number Lithium Fluoride 7789-24-4 100% 232-152-0 3288

### FIRST AID MEASURES

#### 4.1. DESCRIPTION OF FIRST AID MEASURES

GENERAL: Consult a doctor for specific advice.

EYES: Irrigate thoroughly with water for at least 15 minutes. Obtain medical attention.

Wash thoroughly with soap and water. Dry area with clean towel. Remove contaminated clothing and wash clothing before re-use. SKIN:

INHALATION: Remove to fresh air. Perform artificial respiration if breathing has stopped. When breathing is difficult, properly trained personnel may

administer oxygen. Keep affected person warm and at rest. Obtain medical attention.

INGESTION: Induce vomiting if conscious and as directed by properly qualified personnel. Wash out mouth thoroughly with water. Do not give

carbonated drinks. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.

## 4.2. MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED

Refer to Section 2.2 and to section 11.

#### 4.3. INDICATION OF ANY IMMEDIATE MEDICAL ATTENTION AND SPECIAL TREATMENT NEEDED

No Data.

## 5. FIRE FIGHTING MEASURES

#### 5.1. EXTINGUISHING MEDIA

This product does not burn.

## 5.2. SPECIAL HAZARDS ARISING FROM THE SUBSTANCE OR MIXTURE

Material may evolve toxic fumes in a fire.

### 5.3. ADVICE FOR FIREFIGHTERS

None.

## ACCIDENTAL RELEASE MEASURES

## 6.1. PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES

Wear suitable protective clothing & equipment as listed under Section 8. Avoid making dust.

### 6.2. ENVIRONMENTAL PRECAUTIONS

Prevent further leakage or spillage. Do not let product enter drains. Do not discharge to the environment.

### 6.3. METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP

Take up and containerize for proper disposal. Containerize any cleaning materials used for proper disposal.

#### 6.4. REFERENCE TO OTHER SECTIONS

Dispose as in Section 13.

## CRYSTRAN LTD

1, Broom Road Business Park, Poole, Dorset, UK BH12 4PA TEL: +44 1202 307650 FAX +44 1202 307651 Email: sales@crystran.co.uk www.crystran.co.uk Registered in England No.2863378

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#### 7. HANDLING AND STORAGE

## 7.1. PRECAUTIONS FOR SAFE HANDLING:

Keep away from heat. Avoid contact with skin and eyes. Protect against physical damage. Avoid generating dust.

7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep away from foodstuffs. Keep away from acids and strong bases.

#### 7.3. SPECIFIC END USES

Optical Material for Manufacture of Optical Components.

## 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

#### 8.1. CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL) = 2.5 mg/m<sup>3</sup> as Fluoride in 8 hour Time Weighted Average (TWA)

#### 8.2. EXPOSURE CONTROLS

Protective gloves made of PVA are required. Use of a laboratory coat is suggested. Safety goggles or safety glasses with side shields are required if there is any possibility of chipping or dust creation. Respirators must be worn when the threshold limit is exceeded. Provide adequate general mechanical ventilation, and local exhaust ventilation. Wash hands immediately after handling the product.

### 9. PHYSICAL AND CHEMICAL PROPERTIES

#### 9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

FLASH POINT: APPEARANCE: Clear glassy geometric shapes, no odour. Not Applicable BOILING POINT (760mm Hg) 1676°C FLAMMABILITY: Not Applicable MELTING POINT: 842°C EXPLOSIVE PROPERTIES: Not Applicable SPECIFIC GRAVITY: 2.64 g/mL VAPOUR PRESSURE: Not Applicable SOLUBILITY IN WATER: Slightly; 270mg/100ml H<sub>2</sub>O at 20°C pH IN AQUEOUS SOLUTION: Not determined

9.2. OTHER SAFETY INFORMATION

None

## 10. STABILITY AND REACTIVITY

#### 10.1. REACTIVITY

Reacts with strong mineral acids and strong oxidising materials

#### 10.2. CHEMICAL STABILITY

Stable under normal conditions of storage and use

#### 10.3. POSSIBILITY OF HAZARDOUS

REACTIONS None known

#### 10.4. CONDITIONS TO AVOID

Reacts with oxidising agents. Avoid strong acids, particularly hot conc. Sulphuric Acid

## 10.5. INCOMPATIBLE MATERIALS

Strong Mineral Acids. Strong oxidising

materials

# 10.6. HAZARDOUS DECOMPOSITION

**PRODUCTS** 

The following applies to inorganic fluorides in general: biological

mg/l up; algae: Sc quadricauda toxic from 249mg/l up;

effects: fish: L idus LC50 660mg/l; bacteria:Ps putida toxic from 231

protozoa:E.sulcatum toxic from 101mg/l up; U parduczi toxic from

Decomposition product is Hydrogen Fluoride gas in contact with mineral acid.

## 11. TOXICOLOGICAL INFORMATION

## 11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

If swallowed causes nausea, vomiting, stomach pains and diarrhoea. Also harmful in contact with skin. Particular care must be exercised when machining and creating dust or particles.

TOXIC DOSE - LD50 > 143 mg/kg (oral, rat) 119 mg/kg (oral, mouse)

CARCINOGENICITY: No evidence of carcinogenic properties.

MUTAGENICITY/TERATOGENICITY: No evidence of reproductive effects.

#### 12. ECOLOGICAL INFORMATION

#### 12.1. TOXICITY

Hazard to drinking water.

## 12.2. PERSISTENCE AND DEGRADABILITY

No Data 12.3. BIOACCUMULATIVE POTENTIAL

### No Data

12.4. MOBILITY IN SOIL

### No Data 13. DISPOSAL CONSIDERATIONS

### 13.1. WASTE TREATMENT METHODS

Chemical residues are generally classified as special waste, and are covered by regulations which vary according to location. Contact your local waste disposal authority for advice, or pass to a chemical disposal company.

## 14. TRANSPORT INFORMATION

14.1. UN NUMBER: 3288

14.4. PACKING GROUP: III

14.2. UN PROPER SHIPPING NAME:

14.5. ENVIRONMENTAL HAZARDS: Marine Pollutant 14.6. SPECIAL PRECAUTIONS FOR USER: None

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

Not required or conducted

12.6. OTHER ADVERSE AFFECTS

71mg/l up (all values as NaF).

Toxic Solid, inorganic, N.O.S. (Lithium Fluoride). 14.3. TRANSPORT HAZARD CLASS: 6.1

14.7. TRANSPORT IN BULK MARPOL / IBC: No Data

## 15. REGULATORY INFORMATION

## 15.1. SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS / LEGISLATION SPECIFIC FOR THE SUBSTANCE OR MIXTURE

TSCA: Listed in the US TSCA inventory

DSL: Listed in the Canadian Domestic Substances List.

SARA Section 313 (specific toxic chemical listings) Substance is not listed.

Information about limitation of use: For use only by technically qualified individuals.

SVHC according to the REACH Regulations (EC) No. 1907/2006. Substance is not listed.

REACH - Pre-registered substances Substance is listed.

## 16. OTHER INFORMATION

REVISION DATE: 8<sup>th</sup> September 2015 ©2015 Crystran Ltd.

The above information is believed to be correct but does not purport to be all inclusive and must be used only as a guide.

## **CRYSTRAN LTD**

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