SAFETY DATA SHEET

Lanthanum Fluoride Crystal (Eu Doped)

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



Revision 2016: Issued 7th September 2016

MIS PRODUCT IDENTIFIER

FLAMMABILT'

PHYSICAL HAZARD

PERSONAL PROTECTION B

IDENTIFICATION OF THE SUBSTANCE AND THE COMPANY

1.1. PRODUCT IDENTIFIERS:

Product Name: Lanthanum (III) Fluoride; Europium Doped

Synonyms, Trade Names: LaF₃ (Eu) Crystal

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

Identified Uses: Electronic Material for manufacture of fluoride probes.

1.3. DETAILS OF THE SUPPLIER OF THE SAFETY DATA SHEET

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

***** +44 1202 307650

1.4. EMERGENCY TELEPHONE NUMBER

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

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

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

2. HAZARDS IDENTIFICATION

2.1. CLASSIFICATION OF THE SUBSTANCE OR MIXTURE

No Hazardous Product as specified in Directive 67/548/EEC.

2.2. LABEL ELEMENTS

Precautionary Statements:

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

2.3. OTHER HAZARDS

None

3. COMPOSITION/INFORMATION ON INGREDIENTS

3.1. SUBSTANCES

Component Name CAS number EC number (EINECS) EU index UN number Lanthanum Fluoride 13709-38-1 99.7% 237-252-8

13765-25-8 237-368-9 Europium Fluoride 0.3%

4. 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. If discomfort persists obtain medical attention.

SKIN: Wash thoroughly with soap and water. INHALATION: Remove to fresh air. Obtain medical attention.

INGESTION: Wash out mouth thoroughly with water. In severe cases obtain Medical Attention.

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

None Known

5.3. ADVICE FOR FIREFIGHTERS

Use breathing apparatus if necessary.

6. 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.

7. HANDLING AND STORAGE

7.1. PRECAUTIONS FOR SAFE HANDLING:

7.2. Protect against physical damage and avoid generating dust. 7.3. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

Keep away from foodstuffs. Keep away from strong acids.

7.4. SPECIFIC END USES

Electronic Material for Manufacture of fluoride probes.

CRYSTRAN LTD

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8. EXPOSURE CONTROL AND PERSONAL PROTECTION

8.1. CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL) Total inhalable dust: Long term 2.5 mg/m³

EXPOSURE CONTROLS

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. Avoid breathing dust when generated. Wash hands immediately after handling the product.

PHYSICAL AND CHEMICAL PROPERTIES

9.1. INFORMATION ON BASIC PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE: Clear pale yellow geometric shapes, no odour. FLASH POINT: Not Applicable BOILING POINT (760mm Hg) ~ 2400°C FLAMMABILITY: Not Applicable MELTING POINT: 1493°C EXPLOSIVE PROPERTIES: Not Applicable SPECIFIC GRAVITY: 5.94 g/mL VAPOUR PRESSURE: Negligible at 25°C SOLUBILITY IN WATER: pH IN AQUEOUS SOLUTION: Not determined Not soluble in water.

9.2. OTHER SAFETY INFORMATION

None

10. STABILITY AND REACTIVITY

10.1. REACTIVITY

Reacts with mineral acids

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

Avoid strong sulphuric acid. Oxidisers.

10.5. INCOMPATIBLE MATERIALS

Strong Mineral Acids.

HAZARDOUS DECOMPOSITION **PRODUCTS**

Liberates toxic hydrogen fluoride gas in

contact with mineral acid.

11. TOXICOLOGICAL INFORMATION

11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

Particular care should be exercised when machining and creating dust or particles.

TOXIC DOSE - LD50 Not known **CARCINOGENICITY:** No evidence of carcinogenic properties.

MUTAGENICITY/TERATOGENICITY: No evidence of reproductive effects.

12. ECOLOGICAL INFORMATION

12.1. TOXICITY

No Data

12.2. PERSISTENCE AND DEGRADABILITY

No Data

12.3. BIOACCUMULATIVE POTENTIAL

No Data

12.4. MOBILITY IN SOIL

No Data

12.5. RESULTS OF PBT AND vPvB ASSESSMENT

Not required or conducted

12.6. OTHER ADVERSE AFFECTS

The following applies to inorganic fluorides in general: biological effects: fish: L idus LC50 660mg/l; bacteria:Ps putida toxic from 231

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

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

71mg/l up (all values as NaF). Hazard to drinking water.

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: None

14.4. PACKING GROUP: None

14.2. UN PROPER SHIPPING NAME:

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

Not subject to transportation regulations. 14.3. TRANSPORT HAZARD CLASS: None

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 TCSA Inventory

16. OTHER INFORMATION

REVISION DATE: 07th September 2016 ©2016 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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