

# SAFETY DATA SHEET

## SAPPHIRE OPTICAL CRYSTAL

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



Revision 2016 : Issued 5th May 2016

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

#### 1.1. PRODUCT IDENTIFIERS:

Product Name: Sapphire Optical Crystal  
Synonyms, Trade Names: Al<sub>2</sub>O<sub>3</sub> ; Aluminium Oxide; Alumina; Corundum

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

Identified Uses: Optical Material for manufacture of Optical Components.

#### 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

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

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

Not classified as dangerous according to EC directives.

#### 2.2. LABEL ELEMENTS

None

#### 2.3. OTHER HAZARDS

None



### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. SUBSTANCES

| Component Name | CAS number | %    | EC number (EINECS) | EU index | UN number |
|----------------|------------|------|--------------------|----------|-----------|
| Sapphire       | 1344-28-1  | 100% | 215-691-6          | -        | None      |

### 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. Obtain medical attention.  
SKIN: Wash thoroughly with soap and water.  
INHALATION: Remove to fresh air.  
INGESTION: Wash out mouth thoroughly with water and give 2 cups of water to drink.

**MOST IMPORTANT SYMPTOMS AND EFFECTS, BOTH ACUTE AND DELAYED**

None.

#### 4.2. 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

#### 5.3. ADVICE FOR FIREFIGHTERS

None

### 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

None

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

Take up and containerize for proper disposal to avoid sharp edges.

#### 6.4. REFERENCE TO OTHER SECTIONS

Dispose as in Section 13.

### 7. HANDLING AND STORAGE

#### 7.1. PRECAUTIONS FOR SAFE HANDLING:

None

#### 7.2. CONDITIONS FOR SAFE STORAGE, INCLUDING ANY INCOMPATIBILITIES

No special conditions

#### 7.3. SPECIFIC END USES

Optical Material for Manufacture of Optical Components.

## CRYSTRAN LTD

1, Broom Road Business Park, Poole, Dorset, UK BH12 4PA

TEL: +44 1202 307650

Email: [sales@crystran.co.uk](mailto:sales@crystran.co.uk)

[www.crystran.co.uk](http://www.crystran.co.uk)

FAX +44 1202 307651

Registered in England No.2863378

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### 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

#### 8.1. CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL) (As Dust) = 10 mg/m<sup>3</sup> 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

|                          |  |                         |                    |
|--------------------------|--|-------------------------|--------------------|
| APPEARANCE :             | Clear glassy geometric shapes, no odour. | FLASH POINT:            | Not Applicable     |
| BOILING POINT (760mm Hg) | 2977°C                                   | FLAMMABILITY:           | Not Applicable     |
| MELTING POINT:           | 2053°C                                   | EXPLOSIVE PROPERTIES:   | Not Applicable     |
| SPECIFIC GRAVITY:        | 3.97 g/mL                                | VAPOUR PRESSURE:        | Negligible at 25°C |
| SOLUBILITY IN WATER:     | Practically Insoluble                    | pH IN AQUEOUS SOLUTION: | Not determined     |

#### 9.2. OTHER SAFETY INFORMATION

None

### 10. STABILITY AND REACTIVITY

#### 10.1. REACTIVITY

Stable

#### 10.3. POSSIBILITY OF HAZARDOUS REACTIONS

None known

#### 10.5. INCOMPATIBLE MATERIALS

Ethylene Oxide, Chlorine Trifluoride

#### 10.2. CHEMICAL STABILITY

Stable under normal conditions of storage and use.

#### 10.4. CONDITIONS TO AVOID

None known

#### 10.6. HAZARDOUS DECOMPOSITION PRODUCTS

None.

### 11. TOXICOLOGICAL INFORMATION

#### 11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

None known.

TOXIC DOSE - LD50 No Data

CARCINOGENICITY: No evidence of carcinogenic properties.

MUTAGENICITY/TERATOGENICITY: No evidence of reproductive effects.

### 12. ECOLOGICAL INFORMATION

#### 12.1. TOXICITY

Not toxic

#### 12.4. MOBILITY IN SOIL

No Data

#### 12.2. PERSISTENCE AND DEGRADABILITY

No Data

#### 12.5. RESULTS OF PBT AND vPvB ASSESSMENT

Not required or conducted

#### 12.3. BIOACCUMULATIVE POTENTIAL

No Data

#### 12.6. OTHER ADVERSE AFFECTS

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. Normally we would expect sapphire waste to be disposed of as glass or dust. 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: N/A

#### 14.2. UN PROPER SHIPPING NAME:

Non Hazardous Material

#### 14.5. ENVIRONMENTAL HAZARDS: None

#### 14.3. TRANSPORT HAZARD CLASS: None

#### 14.6. SPECIAL PRECAUTIONS FOR USER: 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: Not listed in the TSCA inventory

SARA: 302/304: Not Listed

### 16. OTHER INFORMATION

REVISION DATE: 5<sup>th</sup> May 2015 ©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

1, Broom Road Business Park, Poole, Dorset, UK BH12 4PA

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