

# SAFETY DATA SHEET

## SILVER CHLORIDE OPTICAL CRYSTAL

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



Revision 2016 : Issued 10th May 2016

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

#### 1.1. PRODUCT IDENTIFIERS:

Product Name: Silver Chloride Optical Crystal  
Synonyms, Trade Names: AgCl

#### 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

Harmful by ingestion, inhalation and skin contact. Prolonged exposure may result in argyria, a bluish discolouration of the skin. Irritating to eyes and may irritate skin. Dangerous for the environment.

#### 2.2. LABEL ELEMENTS

Signal Word: **Warning**  
H290 May be corrosive to metals.  
H400 Very toxic to aquatic life.



#### Precautionary Statements:

P273 Avoid release to the environment.

#### 2.3. OTHER HAZARDS

May cause irritation to skin and respiratory tract.

### 3. COMPOSITION/INFORMATION ON INGREDIENTS

#### 3.1. SUBSTANCES

Component Name	CAS number	%	EC number (EINECS)	EU index	UN number
Silver Chloride	7783-90-6	100%	232-033-3	-	3077

### 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. Remove contaminated clothing and wash clothing before re-use.

INHALATION: Remove from exposure, rest and keep warm. In severe cases seek medical attention.

INGESTION: Wash out mouth thoroughly with water and give plenty to drink. 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

Material may evolve toxic fumes in a fire. Hydrogen Chloride gas, Silver oxides.

#### 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:

Wash hands and face thoroughly after working with material. Protect from light. Avoid generating dust.

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

Store at room temperature (15 to 25°C recommended). Keep well closed and protected from direct sunlight and moisture.

#### 7.3. SPECIFIC END USES

Optical Material for Manufacture of Optical Components.

## CRYSTRAN LTD

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Registered in England No.2863378

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### 8. EXPOSURE CONTROL AND PERSONAL PROTECTION

#### 8.1. CONTROL PARAMETERS

OCCUPATIONAL EXPOSURE LIMITS (OEL) = 0.01 mg/m<sup>3</sup> as Silver compounds 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 white/grey crystals or powder.	FLASH POINT:	Not Applicable
BOILING POINT (760mm Hg)	1550°C	FLAMMABILITY:	Not Applicable
MELTING POINT:	457°C	EXPLOSIVE PROPERTIES:	Not Applicable
SPECIFIC GRAVITY:	5.59 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

Darkens on exposure to light

#### 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

Aluminium, Ammonia, Alkali metals, Peroxy compounds, Sulfoxides.

#### 10.5. INCOMPATIBLE MATERIALS

Strong Mineral Acids. Strong oxidising materials

#### 10.6. HAZARDOUS DECOMPOSITION PRODUCTS

May evolve toxic fumes in a fire.

### 11. TOXICOLOGICAL INFORMATION

#### 11.1. INFORMATION ON TOXICOLOGICAL EFFECTS

Harmful by ingestion, inhalation and skin contact. Prolonged exposure may result in argyria, a bluish discolouration of the skin. Irritating to eyes and may irritate skin. Particular care must be exercised when machining and creating dust or particles.

**TOXIC DOSE - LD50** > 10g/kg

**CARCINOGENICITY:** No evidence of carcinogenic properties.

**MUTAGENICITY/TERATOGENICITY:** No evidence of reproductive effects.

### 12. ECOLOGICAL INFORMATION

#### 12.1. TOXICITY

The following applies to silver compounds in general: biological effects: silver ions toxic for aquatic organisms; bacteria: *Ps. putida* toxic from 0.006 mg/l up; protozoa: *U. parduczi* toxic from 0.1 mg/l up; arthropods: *D. daphnia* LC50: 0.5 mg/l; algae: *M. aeruginosa* toxic from 0.0007 mg/l up; *Sc. quadricauda* toxic from 0.009 mg/l up

#### 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

Due to the poor solubility of the product, no harmful effects on aquatic organisms are to be expected when the product is handled and used with due care and attention.

### 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

Not classified as dangerous according to EC Directives.

#### 14.1. UN NUMBER: 3077

#### 14.2. UN PROPER SHIPPING NAME:

Environmentally Hazardous Substance, Solid, N.O.S. (Silver Chloride).

#### 14.3. TRANSPORT HAZARD CLASS: 9

#### 14.4. PACKING GROUP: III

#### 14.5. ENVIRONMENTAL HAZARDS: Marine Pollutant

#### 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: Listed in the TSCA inventory

WHMIS: Not a controlled product under the Canadian Workplace Hazardous Materials Information System

### 16. OTHER INFORMATION

REVISION DATE: 10<sup>th</sup> May 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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