

# Safety Data Sheet

## 1 Identification of the substance and the company

### **Description:**

Product name: Caesium Iodide (Na) Scintillation Crystals

Trade names/synonyms: Sodium doped Caesium Iodide, CsI (Na)

REACH Reg.-No.: exempted from registration in accordance with REACH.

### **Application:**

Inorganic Scintillation Detector Crystal.

### **Company identifier:**

Hilger Crystals

Unit R1 Westwood Estate Margate Kent CT9 4JL UK

Tel.: +44 (0) 1843 231166 email [Sales@hilger-crystals.co.uk](mailto:Sales@hilger-crystals.co.uk)

Web: [www.hilger-crystals.co.uk](http://www.hilger-crystals.co.uk)

### **Emergency information:**

Contact as above (Mon-Thurs 8.00 – 17.00, Fri 8.00- 12:00)

In the event of a medical enquiry please contact your local doctor or hospital A&E department.

## 2 Hazards Identification

### **Classification of the substance:**

EU/EEC - According to: Regulation (EC) No 1272/2008 (CLP)/REACH 1907/2006  
[amended by 2015/830]

According to: EU Directive 67/548/EEC (DSD) or 1999/45/EC (DPD)

CLP • Due to formed nature of this product, no airborne concentrations are expected.

Acute Toxicity Oral 4 - H302

Skin sensitisation 1 – H317

Respiratory sensitisation 1 – H334

DSD/DPD • Due to formed nature of this product, no airborne concentrations are expected.

Harmful (Xn)

Substances toxic to reproduction - Category 1

R22, R61

### **Label Elements**

CLP

WARNING



### **Hazard statements**

H302 - Harmful if swallowed

H317 - May cause an allergic skin reaction

H334 - May cause allergy or asthma symptoms or breathing difficulties if inhaled

H360 - May damage fertility or the unborn child.

## Safety Data Sheet

### Precautionary statements

P201 - Obtain special instructions before use.  
P202 - Do not handle until all safety precautions have been read and understood.  
P261 - Avoid breathing dust.  
P264 - Wash thoroughly after handling.  
P270 - Do not eat, drink or smoke when using this product.  
P272 - Contaminated work clothing should not be allowed out of the workplace.  
P280 - Wear protective gloves, clothing, and eye/face protection, .  
P281 - Use personal protective equipment as required.  
P285 - In case of inadequate ventilation wear respiratory protection.

P304+P341 - IF INHALED: If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.

P342+P311 - If experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician.

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

P363 - Wash contaminated clothing before reuse.

P321 - Specific treatment, see supplemental first aid information.

P333+P313 - If skin irritation or rash occurs: Get medical advice/attention.

P301+P312 - IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell.

P330 - Rinse mouth.

P308+P313 - IF exposed or concerned: Get medical advice/attention.

P501 - Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

DSD/DPD



**Risk phrases** R20 - Harmful by inhalation and if swallowed.  
R61 - May cause harm to the unborn child.

**Safety phrases** S53 - Avoid exposure - obtain special instructions before use.

### Other Hazards

CLP - According to Regulation (EC) No. 1272/2008 (CLP) this material is considered hazardous.

DSD/DPD • According to European Directive 67/548/EEC this material is considered dangerous.

### Classification of the substance or mixture

OSHA HCS 2012 • Due to formed nature of this product, no airborne concentrations are expected.

Acute Toxicity Oral 4

Skin Sensitization 1

Respiratory Sensitization 1

Reproductive Toxicity 1A

## Safety Data Sheet

### Label elements

OSHA HCS 2012

WARNING



### Hazard statements

Harmful if swallowed

### Precautionary statements

Prevention • Wash thoroughly after handling. Do not eat, drink or smoke when using this product.

Response • IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician if you feel unwell. Rinse mouth.

Storage/Disposal • Dispose of content and/or container in accordance with local, regional, national, and/or international regulations.

### Other hazards

OSHA HCS 2012 • Under United States Regulations (29 CFR 1910.1200 - Hazard Communication Standard), this product is considered hazardous.

Canada

According to: WHMIS

### Classification of the substance or mixture

WHMIS • Due to formed nature of this product, no airborne concentrations are expected. Other Toxic Effects - D2A

### Label elements



WHMIS • Other Toxic Effects - D2A.

### Other hazards

WHMIS • In Canada, the product mentioned above is not considered hazardous under the Workplace Hazardous Materials Information System (WHMIS).

### Other hazards:

None

## 3 Composition/Information on Ingredients

### Substances

Material does not meet the criteria of a substance

### Mixtures

Component Name	CAS number	%	EINECS number
Caesium Iodide	7789-17-5	99-100	232-145-2
Sodium Iodide	7681-82-5	<1%	231-679-3

## 4 First-aid measures

### Description of first-aid measures:

GENERAL: Consult a doctor for specific advice.

## Safety Data Sheet

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

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

**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:** Do not induce vomiting. Wash out mouth thoroughly with water and give two cups of water to drink. Do not give carbonated drinks. Never give anything by mouth to an unconscious person. Obtain medical attention immediately.

**Most important symptoms and effects, both acute and delayed:**

Refer to [Section 2](#) and [Section 11](#).

**Indication of any immediate medical attention and special treatment required:**

All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

### 5 Firefighting measures

**Extinguishing media:**

This product does not burn.

**Special hazards arising from the substance:**

In certain fire conditions, traces of other toxic gases cannot be excluded, e.g., Hydrogen Iodide (HI)

**Advice for firefighters:**

Use breathing apparatus if necessary.

### 6 Accidental release measures

**Emergency procedures, personal precautions and protective equipment:**

Wear suitable protective clothing & equipment as listed under [Section 8](#). Avoid making dust.

**Environmental precautions:**

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

**Methods and materials for the containment and cleaning up:**

Take up and containerise for proper disposal. Containerise any cleaning materials used for proper disposal.

### 7 Handling & storage

**Precautions for safe handling:**

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

## Safety Data Sheet

**Conditions for safe storage including any incompatibilities:**

Store in original container in cool dry conditions, keep away from water, foodstuffs and acidic materials. The product is slightly hygroscopic.

**Specific application:**

Scintillation crystal material for radiation detection components.

### 8 Exposure controls/personal protection

**Control parameters:**

No applicable exposure limits available for product or components.

**Exposure controls:**

Protective PVA gloves and an N95 mask are required, and the 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 & chemical properties

**Information on basic physical and chemical properties**

**Appearance:** Whitish colour, no odour

**Flash point:** Not applicable

**Boiling point:** 1280 °C

**Flammability:** Not Applicable

**Melting point:** 621 °C

**Explosive properties:** Not Applicable

**Vapour pressure:** Not applicable

**Solubility in water:** Very soluble 42.5 % @ 20 °C (68 °F)

**pH in aqueous solution:** Not determined

**Other safety information:**

### 10 Stability & reactivity

**Reactivity:** Reacts with strong mineral acids and strong oxidising materials

**Chemical stability:** Stable under normal conditions of storage and use.

**Possibility of hazardous reactions:** None known

**Conditions to avoid:** Can react with oxidising agents. Avoid strong acids.

**Incompatible materials:** Strong Mineral Acids. Strong oxidising materials.

**Hazardous decomposition products:** when heated to decomposition, emits toxic fumes of iodine

## Safety Data Sheet

### 11 Toxicological information

**Information on toxicological effects:**

Toxic by ingestion and inhalation of dust, with a cumulative effect. Particular care must be exercised when machining and creating dust or particles. Inhalation of dust may irritate respiratory system.

**Toxic dose**

LD50 Caesium Iodide 1400 mg/kg oral ratio

LD50 Sodium Iodide 4340 mg/kg oral ratio

**Carcinogenicity:**

No evidence of carcinogenic properties.

**Mutagenicity/teratogenicity:**

Some evidence of reproductive effects.

### 12 Ecological information

**Toxicity:** Danger to drinking water. Poisonous to Fish.

**Persistence and degradability:** No Data

**Bioaccumulative potential:** No Data

**Mobility in soil:** No Data

**Results of PBT and vPvB assessment:** Not required or conducted

**Other adverse effects:** Do not allow product to reach ground water, water course or sewage system. Only release to environment with proper government permit.

### 13 Disposal considerations

**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.

## Safety Data Sheet

### 14 Transport information

UN Number: 3077

UN Proper shipping name: Caesium Iodide, Sodium Iodide compound, solid N.O.S  
(Caesium Iodide Sodium)

Transport hazard class: 9

Packing group: III

Environmental hazards: Marine pollutant

Special user precautions: None

Transport in bulk Marpol / IBC: No Data

### 15 Regulatory information

Safety, health and environmental regulations/legislation for the substance: TSCA:

Listed in the TSCA inventory

SARA: 302/304: Not Listed

SARA: 311/312: Acute health hazard, Chronic health hazard.

SARA (TITLE 313): Caesium Iodide Sodium

WHMIS: This is a controlled product under the Canadian Workplace Hazardous Materials Information System

OSHA: Hazardous product under the OSHA Hazard Communication Standard (29 CFR 1910.1200)

### 16 Other information

Revision date: August 2022

The above information is believed to be true and correct and is supplied as a guide for information only, it does not purport to be all inclusive.