



XI'AN FUNCTION MATERIAL GROUP CO., LTD
Material Safety Data Sheet
Cesium Tin Iodide

1. Product and Company Identification

Trade Name:	Cesium Tin Iodide
Chemical Formula:	CsSnI ₃
Recommended Use:	Scientific research and development
Manufacturer/Supplier:	XI'AN FUNCTION MATERIAL GROUP CO., LTD
Street:	No. 69, Gazelle Valley, High-Tech Zone
City:	XI'AN
State:	Shannxi
Zip Code:	710077
Country:	China
Tel #:	+86-29-88993870/+86-13519132051

2. Hazards Identification

Signal Word:

Danger



Hazard Statements:

H290 May be corrosive to metals
H302+H312+H332: Harmful if swallowed, in contact with skin or if inhaled.
H314: Causes severe skin burns and eye damage
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H335: May cause respiratory irritation.
H360: May damage fertility or the unborn child.
H361: Suspected of damaging fertility or the unborn child.
H410: Very toxic to aquatic life with long lasting effects.

Precautionary Statements:

P202: Do not handle until all safety precautions have been read and understood
P260: Do not breathe dust/ fume/ gas/ mist/ vapors/ spray
P261 Avoid breathing dust/fume/gas/mist/vapors/spray
P264: Wash skin thoroughly after handling.
P270: Do not eat, drink or smoke when using this product.
P271: Use only outdoors or in a well-ventilated area.
P272: Contaminated work clothing should not be allowed out of the workplace.
P273: Avoid release to the environment.
P280: Wear protective gloves/protective clothing/eye protection/face protection
P281: Use personal protective equipment as required.
P301+P312+P330: IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell. Rinse mouth.
P302+P352+P312: IF ON SKIN: Wash with plenty of soap and water. Call a POISON CENTER or doctor/ physician if you feel unwell.
P303+P361+P353: IF ON SKIN (or hair): Remove/Take off

immediately all contaminated clothing. Rinse skin with water/shower.
 P304+P340+P312: IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Call a POISON CENTER or doctor/ physician if you feel unwell.
 P305+P351+P338: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 P308+P313: IF exposed or concerned: Get medical advice/ attention.
 P333+P313: If skin irritation or rash occurs: Get medical advice/ attention.
 P337+P313: If eye irritation persists: Get medical advice/ attention.
 P362: Take off contaminated clothing and wash before reuse.
 P391: Collect spillage.
 P403+P233: Store in a well-ventilated place. Keep container tightly closed.
 P405: Store locked up.
 P501: Dispose of contents/container in accordance with local/regional/national/international regulations.

HMIS Health Ratings (0-4):

Health:	3
Flammability:	1
Physical:	1

3. Composition

Chemical Family:	Perovskite
Additional Names:	N/A

Cesium iodide (CsI):	
Percentage:	0-100 wt%
CAS #:	7789-17-5
EC #:	232-145-2

Tin (II) iodide (SnI ₂):	
Percentage:	0-100 wt%
CAS #:	10294-70-9
EC #:	233-667-3

4. First Aid Procedures

General Treatment:	Seek medical attention if symptoms persist.
Special Treatment:	None
Important Symptoms:	None

Inhalation:	Remove victim to fresh air. Supply oxygen if breathing is difficult. Keep patient warm. Seek immediate medical attention.
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Ingestion:	Seek immediate medical attention.
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Skin:	Wash affected area with mild soap and water. Remove any contaminated clothing. Seek immediate medical attention.
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Eyes:	Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Seek immediate medical attention.
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5. Firefighting Measures

Flammability:	Non-flammable except as powder
Extinguishing Media:	Use water spray, alcohol-resistant foam, dry chemical, or carbon dioxide.

Spec. Fire Fighting Procedure: Use full-face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. See section 10 for decomposition products.

6. Accidental Release Measures

If Material Is Released/Spilled: Wear appropriate respiratory and protective equipment specified in special protection information. Isolate spill area and provide ventilation. Vacuum up spill using a high efficiency particulate absolute (HEPA) air filter and place in a closed container for disposal. Take care not to raise dust. Remove all ignition sources. Evacuate personnel away from dangerous areas.

Environmental Precautions: Isolate runoff to prevent environmental pollution.

7. Handling and Storage

Handling Conditions: Handle under dry protective gas. Avoid contact with the eyes and skin. Wash thoroughly after handling.

Storage Conditions: Store in a cool dry place in a tightly sealed container. Store away from water/moisture, strong bases, oxidizing agents, air. Store in the dark. Store under dry inert gas. This product is moisture sensitive. This product is air sensitive. Protect from humidity and water. Protect from exposure to light. Store apart from materials and conditions listed in section 10. Avoid contact with skin and eyes. Avoid formation of dust and aerosols.

Work/Hygienic Maintenance: Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.

Ventilation: Provide sufficient ventilation to maintain concentration at or below threshold limit.

8. Exposure Controls and Personal Protection

Permissible Exposure Limits:
Threshold Limit Value: 2 mg/m³ as Sn, long-term value
2 mg/m³ as CsI, long-term value
2 mg/m³ as Sn, long-term value

Special Equipment: Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Respiratory Protection: Use a respirator with type N95 (USA) or PE (EN 143) cartridges as a backup to engineering controls. Risk assessment should be performed to determine if purifying respirators are appropriate. Only use equipment tested and approved under appropriate government standards.

Protective Gloves: Nitrile rubber, NBR 0.11mm thick, Rubber gloves

Eye Protection: Safety glasses or goggles

Body Protection: Protective work clothing. Wear close-toed shoes and long sleeves/pants.

9. Physical and Chemical Characteristics

Color: N/A

Form: Powder, Granules, Pellets, Sputtering target, Custom parts

Odor: N/A

Water Solubility: N/A

Boiling Point: N/A

Melting Point: N/A

Flash Point: N/A

Autoignition Temperature: N/A

Density: N/A
Molecular weight: 632.31 g/mol

10. Reactivity

Stability: Stable under recommended storage conditions
Reacts With: Oxidizing agents, strong bases, water/moisture
Incompatible Conditions: Water/ moisture, Light, Air
Hazardous Decomposition Products: Metal oxide fume, Hydrogen iodide (HI), Tin/tin oxides, cesium oxides

11. Toxicological Information

Potential Health Effects:

- Eyes: Cause serious eye damage
- Skin: Harmful in contact with skin. Causes severe skin burns
- Ingestion: Harmful if swallowed. Swallowing will lead to a strong corrosive effect on mouth and throat and to the danger of perforation of esophagus and stomach
- Inhalation: Harmful if inhaled. May cause allergy or asthma symptoms or breathing difficulties if inhaled
- Chronic: N/A

Signs & Symptoms: Inorganic tin salts are poorly absorbed into the body. When parenterally administered tin salts are highly toxic. Tin oxide inhaled as a dust or fume leads to a benign pneumoconiosis with no sign of interference with pulmonary function.

Aggravated Medical Conditions: N/A

Median Lethal Dose: N/A

Carcinogen: IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.
NTP: No component of this product present at levels greater than or equal to 0.1% is identified as a known or anticipated carcinogen by NTP.
OSHA: No component of this product present at levels greater than or equal to 0.1% is identified as a carcinogen or potential carcinogen by OSHA.
ACGIH-A4- Not classifiable as a human carcinogen: Inadequate data on which to classify the agent in terms of its carcinogenicity in humans and/or animals

12. Ecological Information

Aquatic Toxicity: High
Persistent Bioaccumulation Toxicity: No
Very Persistent, Very Bio accumulative: No
Notes: Do not allow undiluted product or large quantities to reach ground water, water course or sewage system
Avoid transfer into the environment

13. Disposal Considerations

Dispose of in accordance with local, state, national, and international regulations.

14. Transportation Data

Hazardous: Hazardous for transportation.



Hazard Class:	8 Corrosive substances
Packing Group:	II
UN Number:	UN3260
Proper Shipping Name:	Corrosive solid, acidic, inorganic, n.o.s. (Cesium Tin Iodide)

15. Regulatory Information

Sec 302 Extremely Hazardous:	No
Sec 304 Reportable Quantities:	N/A
Sec 313 Toxic Chemicals:	No

16. Other Information

This safety data sheet should be used in conjunction with technical sheets. It does not replace them. The information given is based on our knowledge of this product, at the time of publication. It is given in good faith. The attention of the user is drawn to the possible risks incurred by using the product for any other purpose other than that for which it was intended. This does not in any way excuse the user from knowing and applying all the regulations governing his activity. It is the sole responsibility of the user to take all precautions required in handling the product. The aim of the mandatory regulations mentioned is to help the user to fulfill his obligations regarding the use of hazardous products.

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