

SAFETY DATA SHEET
TIN(II) IODIDE (SnI₂) NANOPARTICLES
PUISSANT MATERIALS

No. 40 Sheufu Road, Hsinchu City, Taiwan, 30068

SECTION 1: IDENTIFICATION

Product Name: Tin(II) Iodide Nanoparticles

CAS Number: 10294-70-9

EC Number: 233-660-1

Chemical Formula: SnI₂

Recommended Use: Laboratory research, advanced material applications

Manufacturer: Puissant Materials

Emergency Contact: +886-978-886-468

SECTION 2: HAZARD IDENTIFICATION

GHS Classification:

- Acute Toxicity (Oral), Category 4
- Skin Corrosion/Irritation, Category 2
- Serious Eye Damage/Eye Irritation, Category 2A
- Specific Target Organ Toxicity (Repeated Exposure), Category 2

GHS Label Elements:

- **Pictograms:** ![Hazard Symbols] (Corrosive, Harmful)
 - **Signal Word:** Warning
 - **Hazard Statements:**
 - H302: Harmful if swallowed
 - H315: Causes skin irritation
 - H319: Causes serious eye irritation
 - H373: May cause damage to organs through prolonged exposure
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SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Component	CAS Number	EC Number	Concentration
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Tin(II) Iodide (SnI₂) 10294-70-9 233-660-1 >99%

SECTION 4: FIRST-AID MEASURES

Inhalation: Move victim to fresh air. Seek medical attention if symptoms persist.

Skin Contact: Wash with soap and water. Seek medical advice if irritation occurs.

Eye Contact: Rinse cautiously with water for at least 15 minutes. Remove contact lenses if applicable. Seek medical attention if irritation persists.

Ingestion: Rinse mouth. Do not induce vomiting. Seek immediate medical attention.

SECTION 5: FIRE-FIGHTING MEASURES

Suitable Extinguishing Media: Dry chemical, CO₂, or foam.

Unsuitable Extinguishing Media: Water (may react with material).

Hazardous Combustion Products: Hydrogen iodide, tin oxides.

Protective Equipment: Self-contained breathing apparatus (SCBA) and full protective gear.

SECTION 6: ACCIDENTAL RELEASE MEASURES

Personal Precautions: Wear PPE, including gloves, goggles, and a respirator.

Environmental Precautions: Prevent spillage from entering drains or soil.

Cleanup Methods: Absorb with inert material, collect in labeled containers for disposal. Ventilate the area.

SECTION 7: HANDLING AND STORAGE

Handling Precautions: Avoid breathing dust. Use in a well-ventilated area. Wear protective equipment.

Storage Conditions: Store in a tightly sealed container in a dry, cool, and well-ventilated area. Protect from moisture and light.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

Exposure Limits: No specific occupational exposure limits established.

Engineering Controls: Use local exhaust ventilation.

Personal Protective Equipment (PPE):

- **Respiratory Protection:** Use NIOSH-approved respirator if exposure limits are exceeded.
 - **Hand Protection:** Nitrile or neoprene gloves.
 - **Eye Protection:** Safety goggles.
 - **Skin Protection:** Laboratory coat or protective clothing.
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SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

Property	Value
Appearance	Reddish-orange powder
Odor	Odorless
Molecular Weight	372.52 g/mol
Melting Point	320°C
Boiling Point	Decomposes before boiling
Solubility	Insoluble in water, soluble in acetone
Density	5.28 g/cm ³

SECTION 10: STABILITY AND REACTIVITY

Stability: Stable under recommended conditions.

Incompatible Materials: Strong oxidizers, acids, water.

Hazardous Decomposition Products: Hydrogen iodide, tin oxides.

SECTION 11: TOXICOLOGICAL INFORMATION

Potential Health Effects:

- **Inhalation:** May cause respiratory irritation.
- **Skin Contact:** May cause irritation or sensitization.
- **Eye Contact:** Causes eye irritation.

- **Ingestion:** Harmful if swallowed; may cause gastrointestinal distress.

Chronic Exposure: Prolonged exposure may affect kidneys, liver, and nervous system.

SECTION 12: ECOLOGICAL INFORMATION

Environmental Effects: Toxic to aquatic life. Avoid release into the environment.

Persistence and Degradability: Not easily biodegradable.

Bioaccumulation Potential: No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Waste Disposal: Dispose of according to local, regional, and national regulations. Do not release into water sources.

SECTION 14: TRANSPORT INFORMATION

Regulation	Classification
UN Number	UN 3260
Hazard Class	8 (Corrosive substances)
Packing Group	III
Marine Pollutant	Yes

SECTION 15: REGULATORY INFORMATION

U.S. TSCA Status: Listed

EU REACH Status: Pre-registered

Other Regulations: Complies with local and international regulations.

SECTION 16: OTHER INFORMATION

SDS Revision Date: March 3, 2025

Prepared By: Puissant Materials Safety Compliance Team

Disclaimer: This SDS is intended to provide a guideline for safe handling. The information herein is believed to be accurate but does not constitute a warranty.