



# Safety Data Sheet

Skyspring Nanomaterials, Inc.

www.ssnano.com

## **1 Identification of substance:**

Product details:

Trade name: Antimony Tin Oxide Nanoparticle (ATO, SnO<sub>2</sub>:Sb<sub>2</sub>O<sub>3</sub>=90:10, 40nm)

Stock number: 7050NH

Manufacturer/Supplier:

SkySpring Nanomaterials, Inc.  
2935 Westhollow Dr., Houston, TX 77082, USA  
Phone: 281-870-1700, Fax: 281-870-8002,  
Email: sales@ssnano.com

## **2 Composition/Data on components:**

Substance Name	CAS #	
ANTIMONY TIN OXIDE	None	
Ingredient Name	CAS #	Percent
ANTIMONY(V) OXIDE	1314-60-9	10
TIN(IV) OXIDE	18282-10-5	90
Synonyms:	ATO	

## **3 Hazards identification**

### EMERGENCY OVERVIEW

Irritant.

Irritating to eyes, respiratory system and skin.

Target organ(s): Lungs.

### HMIS RATING

HEALTH: 2\*

FLAMMABILITY: 0

REACTIVITY: 1

### NFPA RATING

HEALTH: 2

FLAMMABILITY: 0

REACTIVITY: 1

\*additional chronic hazards present.

For additional information on toxicity, please refer to Section 11.

#### **4 First aid measures**

##### ORAL EXPOSURE

If swallowed, wash out mouth with water provided person is conscious. Call a physician.

##### INHALATION EXPOSURE

If inhaled, remove to fresh air. If not breathing give artificial respiration. If breathing is difficult, give oxygen.

##### DERMAL EXPOSURE

In case of contact, immediately wash skin with soap and copious amounts of water.

##### EYE EXPOSURE

In case of contact, immediately flush eyes with copious amounts of water for at least 15 minutes.

#### **5 Fire fighting measures**

##### FLASH POINT

N/A

##### AUTOIGNITION TEMP

N/A

##### FLAMMABILITY

N/A

##### EXTINGUISHING MEDIA

Suitable: Water spray. Carbon dioxide, dry chemical powder, or appropriate foam.

##### FIREFIGHTING

Protective Equipment: Wear self-contained breathing apparatus and protective clothing to prevent contact with skin and eyes.

Specific Hazard(s): Emits toxic fumes under fire conditions.

#### **6 Accidental release measures**

##### PROCEDURE(S) OF PERSONAL PRECAUTION(S)

Wear respirator, chemical safety goggles, rubber boots, and heavy rubber gloves.

##### METHODS FOR CLEANING UP

Sweep up, place in a bag and hold for waste disposal. Avoid raising dust. Ventilate area and wash spill site after material pickup is complete.

#### **7 Handling and storage**

##### HANDLING

User Exposure: Do not breathe dust. Avoid contact with eyes, skin, and clothing. Avoid prolonged or repeated exposure.

##### STORAGE

Suitable: Keep tightly closed.

#### **8 Exposure controls and personal protection**

##### ENGINEERING CONTROLS

Safety shower and eye bath. Mechanical exhaust required.

#### PERSONAL PROTECTIVE EQUIPMENT

Respiratory: Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU). Where risk assessment shows air-purifying respirators are appropriate use a dust mask type N95 (US) or type P1 (EN 143) respirator.

Hand: Compatible chemical-resistant gloves.

Eye: Chemical safety goggles.

#### GENERAL HYGIENE MEASURES

Wash thoroughly after handling.

### **9 Physical and chemical properties:**

Appearance      Physical State: Solid Solid

Color: Dull Blue

Form: Powder

Property	Value	At Temperature or Pressure
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pH N/A

BP/BP Range      N/A

MP/MP Range      655 °C

Freezing Point      N/A

Vapor Pressure      N/A

Vapor Density      N/A

Saturated Vapor Conc. N/A

SG/Density      5.2 g/cm<sup>3</sup>

Bulk Density      N/A

Odor Threshold      N/A

Volatile%      N/A

VOC Content      N/A

Water Content      N/A

Solvent Content      N/A

Evaporation Rate      N/A

Viscosity      N/A

Surface Tension      N/A

Partition Coefficient      N/A

Decomposition Temp.      N/A

Flash Point      N/A

Explosion Limits      N/A

Flammability      N/A

Autoignition Temp      N/A

Refractive Index      N/A

Optical Rotation      N/A

Miscellaneous Data      N/A

Solubility N/A

N/A = not available

### **10 Stability and reactivity**

STABILITY

Stable: Stable.

Materials to Avoid: Strong oxidizing agents.

**HAZARDOUS DECOMPOSITION PRODUCTS**

Hazardous Decomposition Products: Antimony/antimony oxides,  
Tin/tin oxides, Nature of decomposition products not known.

**HAZARDOUS POLYMERIZATION**

Hazardous Polymerization: Will not occur

**11 Toxicological information**

**ROUTE OF EXPOSURE**

Skin Contact: May cause skin irritation.

Skin Absorption: May be harmful if absorbed through the skin.

Eye Contact: May cause eye irritation.

Inhalation: May be harmful if inhaled. Material may be irritating to mucous membranes and upper respiratory tract.

Ingestion: May be harmful if swallowed.

**TARGET ORGAN(S) OR SYSTEM(S)**

Lungs. Blood. Liver. Heart. Spleen. Eyes.

**SIGNS AND SYMPTOMS OF EXPOSURE**

To the best of our knowledge, the chemical, physical, and toxicological properties have not been thoroughly investigated.

**12 Ecological information:**

No data available.

**13 Disposal considerations**

**APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION**

Contact a licensed professional waste disposal service to dispose of this material.

Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber. Observe all federal, state, and local environmental regulations.

**14 Transport information**

**DOT**

Proper Shipping Name: Antimony compounds, inorganic,  
solid, n.o.s.

UN#: 1549

Class: 6.1

Packing Group: Packing Group III

Hazard Label: Toxic substances.

PIH: Not PIH

**IATA**

Proper Shipping Name: Antimony compound, inorganic, solid, n.o.s.

IATA UN Number: 1549

Hazard Class: 6.1

Packing Group: III

## **15 Regulations**

### US CLASSIFICATION AND LABEL TEXT

Indication of Danger: Irritant.

Risk Statements: Irritating to eyes, respiratory system and skin.

Safety Statements: In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

US Statements: Target organ(s): Lungs.

### UNITED STATES REGULATORY INFORMATION

DEMINIMIS: 1 %

### UNITED STATES - STATE REGULATORY INFORMATION

#### CALIFORNIA PROP - 65

California Prop - 65: This product is or contains chemical(s) known to the state of California to cause cancer.

#### CANADA REGULATORY INFORMATION

WHMIS Classification: This product has been classified in accordance with the hazard criteria of the CPR, and the MSDS contains all the information required by the CPR.

DSL: Yes

NDSL: No

## **16 Other information:**

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information to ensure proper use and protect the health and safety of employees. This information is furnished without warranty, and any use of the product not in conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user.