

Plasmaterials, Inc.  
 2268 Research Drive  
 Livermore, CA 94550  
 Ph: (925) 447-4030 Fx: (925) 447-4031  
<http://plasmaterials.com>

## MATERIAL SAFETY DATA SHEET

### Section 1- PRODUCT IDENTIFICATION

COMPOSITION <b>SrTiO3</b>	PRODUCT NAME <b>Strontium Titanate</b>
------------------------------	-------------------------------------------

### Section 2- HAZARDOUS INGREDIENTS

Note: Products under normal conditions do not represent an inhalation, ingestion or contact health hazard.

MATERIAL OR COMPONENT	CAS NUMBER	WT%	EXPOSURE LIMITS	
			OSHA PEL (Mg/M3)	ACGIH TLV(MG/M3)
<b>Strontium Titanate</b>	<b>1206-05-9</b>	<b>183.52</b>	<b>N/E</b>	<b>N/E</b>

### Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR <b>White-gray Powder, Odorless</b>
MELTING POINT (BASE METAL)  <b>2060.0 degrees C</b>	SPECIFIC GRAVITY  <b>N/E</b>

### Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) <b>NE or N/A</b>	Flammable Limits <b>Non Flammable</b>	LEL <b>N/A</b>	UEL <b>N/A</b>
EXTINGUISHING MEDIA <b>USE: graphite or dry sodium chloride. DO NOT use water.</b>			
SPECIAL FIRE FIGHTING PROCEDURES <b>Firefighters must wear full face, self contained breathing apparatus with full protective clothing to prevent contact with skin and eyes</b>			
UNUSUAL FIRE AND EXPLOSION HAZARDS			

### Section 5- REACTIVITY DATA

STABILITY	INCOMPATIBILITY (MATERIALS TO AVOID) <b>Strong acids and strong bases</b>
CONDITIONS TO AVOID <b>None Reported</b>	
HAZARDOUS DECOMPOSITION PRODUCTS <b>Strontium oxide and titanium oxide.</b>	

## Section 6- HEALTH HAZARD GUIDE

MAJOR EXPOSURE HAZARD

**Inhalation**  **Skin**  **Skin Absorption**  **Eye Contact**  **Ingestion**

EFFECTS OF OVEREXPOSURE

**To the best of our knowledge, the chemical, physical and toxicology properties of strontium titanate have not been thoroughly investigated and recorded. Strontium compounds have a low order of toxicity. It is chemically and biologically similar to calcium. The oxides and hydroxides are moderately caustic materials. For Titanium compounds, these materials are considered to be physiologically inert. There are no reported cases in the literature where titanium as such has caused intoxication. The dusts of titanium compounds such as titanium oxide may be in the nuisance category. (SAX, Dangerous Properties of Industrial Materials, Sixth Edition)**

**INHALATION:** Acute: may be a nuisance dust. May cause coughing and shortness of breathe. Chronic: no chronic health effects recorded.

**SKIN CONTACT:** Acute: may cause irritation. Chronic: no chronic health effects recorded.

**EYE CONTACT:** Acute: dust may cause irritation. Chronic: no chronic health effects recorded.

**INGESTION:** Acute: no acute health effects recorded. Chronic: no chronic health effects recorded.

**TARGET ORGANS:** no target organs for strontium titanate have been recorded.

EMERGENCY & FIRST AID PROCEDURES

**INHALATION:** Remove victim from exposed area to fresh air. Keep warm and quiet. Give oxygen if breathing is difficult and seek medical attention.

**SKIN CONTACT:** Remove contaminated clothing and shoes immediately. Brush material off skin and wash affected area with mild soap and water. Seek medical attention.

**EYE CONTACT:** Flush eyes with lukewarm water, lifting upper and lower eyelids for at least 15 minutes. Seek medical attention.

**INGESTION:** Give 1-2 glasses of milk or water and induce vomiting; seek medical attention. Never induce vomiting or give anything by mouth to an unconscious person.

## Section 7- SPILL OR LEAK PROCEDURES

SPILL OR LEAK PROCUDRES

**Wear appropriate respiratory and protective equipment. 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 proper disposal. Take care not to raise dust.**

WASTE DISPOSAL METHODS

**Observe all federal, state and local regulations when storing or disposing of this substance.**

## Section 8- SPECIAL PROTECTION

RESPIRATORY

**NIOSH approved dust respirator.**

VENTILATION

**Local exhaust: to maintain concentration at low exposure levels.**

**Mechanical (General): Recommended**

EYE PROTECTION & PROTECTIVE CLOTHING

**Use safety glasses.**

## **Section 9- SPECIAL PRECAUTIONS**

**Implement engineering and work practice controls to reduce and maintain concentration of exposure at low levels. Use good housekeeping and sanitation practices. 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.**

**Some of the chemicals listed here are research or experimental substances which may be toxic, as defined by various governmental regulations. In accordance with the Environmental Protection Agency regulations and the Toxic Control Substance Control Act (TSCA) these materials should only be handled by, or under the direct supervision of a "technically qualified individual" as defined in 40 CFR 710.25(aa).**

The information in this MSDS was obtained from sources, which we believe are reliable. However, the information is provided without any representation or warranty, express or implied, regarding the accuracy or correctness.

The conditions or methods of handling, storage, use and disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product.