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MATERIAL SAFETY DATA SHEET

Section 1- PRODUCT IDENTIFICATION

COMPOSITION SnO2	PRODUCT NAME Tin Oxide Powder and Pieces
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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)
Tin Oxide	18282-10-5	0.0-100.0	2mg/m3	2mg/m3

Section 3- PHYSICAL DATA

MATERIAL IS (AT NORMAL CONDITIONS) <input type="checkbox"/> Liquid <input type="checkbox"/> Solid <input type="checkbox"/> Gas <input type="checkbox"/> Other	APPEARANCE AND ODOR White powder and pieces, no odor
MELTING POINT (BASE METAL) 1630.0C	SPECIFIC GRAVITY 6.95gm/cc

Section 4- FIRE AND EXPLOSION

Flash Point (Method Used) N/A	Flammable Limits N/A	LEL N/A	UEL N/A
EXTINGUISHING MEDIA N/A. Use suitable extinguishing agent for surrounding materials and type of fire.			
SPECIAL FIRE FIGHTING PROCEDURES Firefighters must wear full face, self-contained breathing apparatus with full protective clothing to prevent contact with skin and eyes. Fumes from fire are hazardous. Isolate run-off to prevent environmental pollution.			
UNUSUAL FIRE AND EXPLOSION HAZARDS When heated to decomposition, tin oxide may emit acrid smoke and irritating fumes.			

Section 5- REACTIVITY DATA

STABILITY Stable	INCOMPATIBILITY (MATERIALS TO AVOID) Aluminum, Potassium, Magnesium, Sodium, ClF3, HS3.
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CONDITIONS TO AVOID

None

HAZARDOUS DECOMPOSITION PRODUCTS

Tin and SnO₂

Section 6- HEALTH HAZARD GUIDE

MAJOR EXPOSURE HAZARD

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

EFFECTS OF OVEREXPOSURE

Tin compounds have variable toxicity. Elemental tin and inorganic tin compounds have low toxicity and are poorly absorbed when ingested. Some inorganic tin salts are irritating or can cause liberate toxic fumes on decomposition. The latter is particularly true of tin halogens. (Sax, Dangerous Properties of Industrial Materials, eighth edition)

INHALATION: Acute; may cause irritation of the upper respiratory system. Chronic; may cause pneumoconiosis.

SKIN CONTACT: Acute; may cause irritation. Chronic; None recorded.

EYE CONTACT: Acute; may cause irritation. Chronic; None recorded.

INGESTION: Acute; Poor absorption makes it relatively non-toxic. Chronic; None recorded.

TARGET ORGANS: May affect respiratory system.

EMERGENCY & FIRST AID PROCEDURES

INHALATION: Remove victim to fresh air; keep warm and quiet and seek medical attention.

SKIN CONTACT: Remove contaminated clothing from affected area; brush material off skin.

Wash affected area with mild soap and water. Seek medical attention if symptoms persist.

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

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 PROCEDURES

Wear appropriate protective equipment specified in section 8. Isolate spill area and provide ventilation. Scoop or vacuum the spill using 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.

Section 8- SPECIAL PROTECTION

RESPIRATORY

NIOSH-approved dust respirator.

VENTILATION

Local exhaust: Maintain concentration at or below PEL, TLV.

EYE PROTECTION & PROTECTIVE CLOTHING

Safety glasses, rubber gloves and protective gear suitable to prevent contamination.

Section 9- SPECIAL PRECAUTIONS

Implement engineering and work practice controls to reduce and maintain concentration of exposure. Handle in controlled inert atmosphere. Minimize exposure of cadmium by local exhaust and enclosing process if/when possible. Use good housekeeping and sanitation practices. Do not use tobacco or food in work area. Wash thoroughly before eating or smoking. Shower and change clothes at the end of workshift. Do not blow dust off clothing or skin with compressed air.

Some of the chemicals listed herein are research or experimental substances which may be toxic, as defined by various governmental regulations. In accordance with Environmental Protection Agency regulations and the Toxic 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 710.2(aa).

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