

LTS (CHEMICAL) INC.  
MATERIAL SAFETY DATA SHEET  
TIN OXIDE

GENERAL

MANUFACTURER/SUPPLIER: LTS (CHEMICAL) INC.  
COMPANY'S STREET: 100 RED SCHOOLHOUSE RD.  
COMPANY'S CITY: CHESTNUT RIDGE  
COMPANY'S STATE: NEW YORK  
COMPANY'S ZIP CODE: 10977  
COMPANY'S EMERGENCY TEL. #: 800 424 9300 (LOCAL)  
703 527 3887 (INTERNATIONAL)  
COMPANY'S TEL #: 845-510 4119  
DATE MSDS PREPARED: 02/03/05  
DATE MSDS REVISED: 4/4/2007

1. PRODUCT IDENTIFICATION

PRODUCT NAME: TIN OXIDE  
SYNONYM: STANNIC OXIDE, STANNIC ANHYDRIDE, CASSITERITE  
CHEMICAL NATURE: METAL OXIDE  
FORMULA: SnO<sub>2</sub>, SnOx, SnO  
FORMULA Weight: 150.71  
CAS #: 18282-10-5 (GRANULES AND POWDER)  
21651-19-4 (TARGET)

2. PHYSICAL AND CHEMICAL CHARACTERISTICS

BOILING POINT: 1800 - 1900°C (SUBLIMES)  
MELTING POINT: 1630°C  
DENSITY: 6.95  
VAPOR DENSITY: N/A  
VAPOR PRESSUR (MM Hg): N/A  
% VOLATILES: 0  
SOLUBILITY IN H<sub>2</sub>O: INSOLUBLE  
APPEARANCE AND ODOR: BLUISH WHITE, DARK GRAY, BLACK POWDER,  
GRANULES, SPUTTERING TARGETS, INGOTS, RODS ETC.  
ODORLESS

3. HAZARD IDENTIFICATION

HAZARDOUS COMPONENTS %  
TIN 0-100%  
OSHA/PEL: 2 mg/m<sup>3</sup>  
ACGIH/TLV 2 mg/m<sup>3</sup>  
HMIS RATINGS:  
HEALTH: 1  
FLAMMABILITY: 0  
REACTIVITY: 0  
PROTECTIVE EQUIPMENT: F: GLASSES, GLOVES, APRON, DUST MASK.

4. FIRE FIGHTING MEASURES

FLASH POINT (METHOD USED): N/A  
AUTOIGNITION TEMPERATURE: NO DATA  
FLAMMABLE LIMITS:  
UPPER: N/A  
LOWER: N/A  
FLAMMABILITY: NON-FLAMMABLE  
EXTINGUISHING MEDIA: NON-COMBUSTIBLE, USE EXTINGUISHING MEDIA  
APPROPRIATE FOR SURROUNDING FIRE.  
SPECIAL FIRE FIGHTING

PROCEDURES: USE PROTECTIVE CLOTHING AND BREATHING EQUIPMENT APPROPRIATE FOR THE SURROUNDING FIRE.

UNUSUAL FIRE AND EXPLOSION HAZARDS: NONE IDENTIFIED.

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#### 5. HEALTH HAZARD INFORMATION

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EFFECTS OF OVER EXPOSURE:

ACUTE EFFECTS:  
INGESTION: MAY CAUSE NAUSEA, VOMITING AND DIARRHEA.  
INHALATION: MAY CAUSE IRRITATION TO RESPIRATORY TRACT LEADING TO COUGH AND SHORTNESS OF BREATH  
SKIN: MAY CAUSE IRRITATION WITH REDNESS AND PAIN  
EYE: MAY CAUSE IRRITATION WITH REDNESS AND PAIN.  
CHRONIC EFFECTS: INHALATION OF DUST MAY CAUSE PNEUMOCONIOSIS.  
ROUTES OF EXPOSURE: MOST LIKELY INGESTION.  
OTHER HEALTH HAZARDS: NONE KNOWN.  
CARCINOGENICITY:  
NTP: NO  
IARC: NO  
OSHA: NO  
EPA: NO

MEDICAL CONDITIONS GENERALLY AGGRAVATED BY EXPOSURE: PERSON WITH RESPIRATORY PROBLEM MAY BE MORE PRONE TO EFFECT.

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#### 6. STABILITY

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STABILITY: STABLE UNDER NORMAL CONDITIONS  
CONDITION TO AVOID: NONE  
INCOMPATIBILITY (MATERIAL TO AVOID): CHLORINE TRIFLUORIDE, HYDROGEN TRISULFIDE, MAGNESIUM, POTASSIUM, SODIUM.  
HAZARDOUS DECOMPOSITION PRODUCTS: NO DATA.  
HAZARDOUS POLYMERIZATION: WILL NOT OCCUR.

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#### 7. EMERGENCY AND FIRST AID PROCEDURES:

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INGESTION: INDUCE VOMITING IMMEDIATELY AS DIRECTED BY MEDICAL PERSONNEL. NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. GET MEDICAL ATTENTION.  
INHALATION: REMOVE TO FRESH AIR. GET MEDICAL ATTENTION FOR ANY BREATHING DIFFICULTY.  
SKIN: REMOVE CONTAMINATED CLOTHING, FLOOD SKIN WITH LARGE AMOUNTS OF WATER. IF IRRITATION PERSISTS SEEK MEDICAL ATTENTION.  
EYE: IMMEDIATELY FLUSH EYES, INCLUDING UNDER EYELIDS, WITH LARGE AMOUNTS OF WATER FOR AT LEAST 15 MINUTES. CALL A PHYSICIAN.

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#### 8. HANDLING AND STORAGE

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HANDLING AND STORAGE: KEEP CONTAINER TIGHTLY CLOSED. STORE IN A COOL, DRY, WELL-VENTILATED AREA. WASH THOROUGHLY AFTER USE.

OTHER PRECAUTIONS: USE LAB COAT AND APRON, FLAME AND CHEMICAL RESISTANT COVERALLS, EYEWASH CAPABLE OF SUSTAINED FLUSHING, SAFETY DRENCH SHOWER AND HYGIENIC FACILITIES FOR WASHING.

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## 9. SPILL OR LEAK PROCEDURES

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STEPS TO BE TAKEN IN  
CASE MATERIAL IS  
RELEASED OR SPILLED:

WEARING FULL PROTECTIVE EQUIPMENT, COVER SPILL  
WITH DRY SAND OR VERMICULITE. MIX WELL AND  
CAREFULLY TRANSFER TO A CONTAINER.

RESPIRATORY PROTECTION  
(SPECIFY TYPE):

HIGH EFFICIENCY PARTICLE RESPIRATOR.

VENTILATION:

LABORATORY FUME HOOD.

PROTECTIVE GLOVES:

RUBBER GLOVES.

EYE/FACE PROTECTION:

ANSI APPROVED SAFETY GLASSES.

PROTECTIVE CLOTHING:  
APRON.

CHEMICAL RESISTANT COVERALLS, LAB COAT OR

WASTE DISPOSAL METHOD:

IN ACCORDANCE WITH LOCAL, STATE AND FEDERAL  
REGULATIONS.

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## 10. TOXICITY DATA

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ORAL RAT LD50: > 20 gm/kg.

CARCINOGEN:

NTP:

NO

IARC:

NO

METALLIC TIN IS RELATIVELY NON-TOXIC. EXPOSURE TO  
DUST OR FUMES OF INORGANIC TIN SALTS IS KNOWN TO  
CAUSE BENIGN INFLAMMATION OF THE LUNG TISSUE, A  
CONDITION IN WHICH THERE IS NO DISTINCTIVE FIBROSIS,  
NO SIGN OF DISABILITY, NO COMPLICATING FACTORS.

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## 11. TRANSPORTATION DATA

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NOT REGULATED

HAZARD CLASS:

NONE

ADR/RID CLASS:

NOT REGULATED

IMDG CLASS:

NOT REGULATED

AIR TRAN. ICAO/IATA CLASS:

REGULATED

MARITIME TRAN. IMDG CLASS:

NOT REGULATED

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## 12. OTHER INFORMATION

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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.