



**MATERIAL SAFETY DATA SHEET**  
COMPLIES WITH 29 CFR 1910.1200.  
OSHA HAZARD COMMUNICATION RULE

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## CHEMICAL IDENTITY

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LABEL IDENTITY	<b>LITHIUM TANTALATE</b>	
CHEMICAL NAME/SYNONYMS	<b>LITHIUM TANTALATE</b>	
FORMULA	<b>LiTaO<sub>3</sub></b>	
HAZARDOUS INGREDIENTS	<b>Lithium Tantalate</b>	
<b>CAS#:</b> 12031-66-2	<b>TLV:</b> Not Set	<b>OSHA PEL:</b> Not Set
<b>%:</b> 100	5mg/m <sup>3</sup> (Ta)	5mg/m <sup>3</sup> (Ta)

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## PHYSICAL AND CHEMICAL PROPERTIES

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COLOR, FORM AND ODOR	<b>ND</b>
BOILING POINT, 760 MM HG	<b>ND</b>
DENSITY (gm/cc)	<b>ND</b>
VAPOR PRESSURE	<b>NA</b>
% VOLATILE BY VOLUME (%)	<b>NA</b>
REACTION WITH WATER	<b>ND</b>
EVAPORATION RATE (H <sub>2</sub> O=1)	<b>NA</b>
SOLUBILITY IN WATER & BY WEIGHT	<b>ND</b>
MELTING POINT	<b>ND</b>

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## FIRE AND EXPLOSION HAZARD DATA

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FLASH POINT	<b>NA</b>
AUTOIGNITION TEMPERATURE (°C)	<b>NA</b>
FLAMMABILITY	<b>Non-flammable</b>
EXTINGUISHING MEDIA	<b>Dry chemical, CO<sub>2</sub></b>
SPECIAL FIRE FIGHTING PROCEDURES	<b>Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.</b>
UNUSUAL FIRE & EXPLOSION HAZARDS	<b>When heated to decomposition, it may emit toxic fumes.</b>



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### HEALTH HAZARD INFORMATION

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ROUTES OF ENTRY: INHALATION: **Yes** SKIN: **Yes** INGESTION: **Yes**

TOXICITY DATA: **No specific data for this compound;**

Ta Data: imp-rat TDLO: 3760mg/kg: ETA

Ta2O5 data: 8000mg/kg

HEALTH HAZARD RATING: Health: **2** Flammability: **0** Reactivity: **0** Personal: **E**

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **Respiratory Disorders**

EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **May cause sneezing, coughing, difficulty breathing and irritation of the mucus membrane of the respiratory tract.**

DERMAL/EYE CONTACT: **may cause irritation, itching and dermatitis to skin. May cause burning sensation, irritation, redness and watering of the eyes if it comes in contact.**

OTHER: **Li compounds: has been implicated in the development of aplastic anemia. Li Oxide, hydroxide, carbonate etc. are strong bases and these solutions in water are very caustic. Li ion has CNS toxicity. Large doses of Li compounds have caused dizziness and prostration. Can cause kidney damage, anorexia, nausea, apathy, coma and death.**

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CARCINOGENICITY: **Experimental ETA** NTP: **NO** IARC MONOGRAPHS: **NO** OSHA REGULATE: **NO**

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EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Give 1-2 glasses of water or milk & induce vomiting, seek medical attention.**

INHALATION: **Remove victim to fresh air, administer oxygen, seek medical attention.**

SKIN CONTACT: **Brush material off skin, wash affected area with soap & water, medical attn.**

EYE CONTACT: **Flush with lukewarm water for 15 minutes, seek medical attention.**

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### REACTIVITY DATA

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STABILITY

CONDITIONS CONTRIBUTING TO UNSTABILITY

INCOMPATIBILITY (MATERIALS TO AVOID)

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS POLYMERIZATION

CONDITIONS TO AVOID

**Stable**

**None**

**Strong acids, strong bases**

**Li, Li Ox, Ta, TaOx**

**Will Not Occur**

**Heat, flame and incompatible materials**



## LITHIUM TANTALATE MATERIAL SAFETY DATA SHEET

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### SAFE HANDLING AND USE

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STEPS TO BE TAKEN IN CASE MATERIAL IS RELEASED OR SPILLED: **Wear a self-contained breathing apparatus & full protective clothing. Isolate the area and insure that proper ventilation is available. Vacuum up spill using high efficiency unit and place in a container for proper disposal. Take care not to raise dust.**

WASTE DISPOSAL METHOD: **According to local, state and federal regulations.**

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### SPECIAL PROTECTIVE INFORMATION

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RESPIRATORY PROTECTION	<b>NIOSH approved dust-mist-fume cartridge respirator</b>
VENTILATION	<b>Local exhaust: Maintain exposure below TLV for TA Mechanical exhaust: not recommended Special: Handle in controlled environment</b>
PROTECTIVE GLOVES	<b>Neoprene</b>
EYE PROTECTION	<b>Safety glasses</b>
OTHER PROTECTIVE EQUIPMENT	<b>Wear protective clothing to prevent contamination of skin and clothes.</b>

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### SPECIAL PRECAUTIONS

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PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE: **Store in tightly closed containers in a cool, dry place. Wash hands and face thoroughly after handling and before eating.**

#### TRANSPORTATION REQUIREMENTS

DOT CLASS:	<b>Not classified</b>
UN NUMBER:	<b>NC</b>
IMCO CLASS:	<b>NC</b>
OTHER:	<b>ND</b>

#### OTHER PRECAUTIONARY LABELING

**NO DATA**

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THE ABOVE INFORMATION IS ACCURATE TO THE BEST OF OUR KNOWLEDGE. HOWEVER, SINCE DATA, SAFETY STANDARDS AND GOVERNMENT REGULATIONS ARE SUBJECT TO CHANGE THE CONDITIONS OF HANDLING AND USE, OR MISUSE ARE BEYOND OUR CONTROL, **ANGSTROM SCIENCES** MAKE NO WARRANTY, EITHER EXPRESSED OR IMPLIED, WITH RESPECT TO THE COMPLETENESS OR CONTINUING ACCURACY OF THE INFORMATION CONTAINED HEREIN AND DISCLAIMS ALL LIABILITY FOR THE RELIANCE THEREON. USER SHOULD SATISFY HIMSELF THAT HE HAS ALL CURRENT DATA RELEVANT TO HIS PARTICULAR USE.

**NA= NOT APPLICABLE**

**ND= NO DATA FOUND**

**NR=NOT RECORDED**