SECTION I - IDENTIFICATION

PRODUCT NAME: Tin Oxide (SnO2) Hydrate
SYNONYMS: Stannic Oxide Hydrate, Beta Stannic Acid, Alpha Stannic Acid, Meta Stannic Acid
CHEMICAL FAMILY: Inorganic Hydrate
FORMULA: SnO2 x H2O
CAS NUMBER: 18282-10-5
EC NUMBER: 2421590

NOTE: For regulatory purposes under TSCA and EINECS this material is considered to be a mixture of tin oxide (SnO2) and water. Therefore, the CAS Registry and EC Numbers used to identify this material are those for tin oxide. The commercial products are hydrated forms of tin oxide which may also be described by CAS RN 22650-91-5.

SECTION II - HAZARDOUS INGREDIENTS

<table>
<thead>
<tr>
<th>HAZARDOUS INGREDIENT</th>
<th>PERCENT</th>
<th>CAS-NUMBER</th>
<th>PEL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hydrated Tin Oxide (SnO2 x H2O)</td>
<td>97.5 to 100%</td>
<td>18282-10-5</td>
<td>2.0 mg/m3 (NIOSH)</td>
</tr>
<tr>
<td>Nitric Acid (HNO3)</td>
<td>0 to 2.5%</td>
<td>7697-37-2</td>
<td>5.0 mg/m3 (NIOSH)</td>
</tr>
</tbody>
</table>

SECTION III - PHYSICAL DATA

APPEARANCE: White or light brown powder with acidic odor
BOILING POINT: Sublimes at 1800 to 1900 °C
VAPOR PRESSURE: ND
VAPOR DENSITY (AIR=1): ND
SPECIFIC GRAVITY: 5.2
pH: <5.0 (10% slurry in water)
SOLUBILITY IN WATER: Insoluble
MELTING POINT: 1630 °C

SECTION IV - FIRE AND EXPLOSION DATA

FLASHPOINT: Not Applicable, not flammable
EXTINGUISHING MEDIA: Suitable for surrounding fires
AUTO IGNITION TEMPERATURE: Not Applicable, not flammable
SPECIAL FIRE FIGHTING PROCEDURES: None known
Material Safety Data Sheet
MAGNESIUM ELEKTRON, INC.

SECTION V - REACTIVITY DATA

STABILITY: Stable
HAZARDOUS POLYMERIZATION: Non Known
INCOMPATIBILITY: Chlorine, Turpentine
HAZARDOUS DECOMPOSITION PRODUCTS: Non Known

SECTION VI - HEALTH DATA

THRESHOLD LIMIT VALUE: Tin Oxide (as SnO2) NIOSH PEL: 2.0 mg/m3 (TWA) IDLH: 400 mg/m3
Nitric Acid (as HNO3) NIOSH PEL: 5.0 mg/m3 (TWA)
LISTED CARCINOGEN: Not a suspected carcinogen
MEDICAL CONDITION AGGRAVATED: May aggravate respiratory ailments
INHALATION: Possible respiratory irritant. May cause stannosis, a form of pneumoconiosis, after prolonged exposure.
INGESTION: Non-Toxic. Tin Oxide (SnO2) LD50 > 2 g/kg bodyweight. Ingestion is not recommended.
EYES: May be irritating and/or abrasive to eyes
SKIN (DERMAL): Possible skin irritant, may cause dermatitis after prolonged exposure.

SECTION VII FIRST AID

BREATHING (INHALATION): Remove to fresh air. If breathing has stopped, administer artificial respiration, seek medical aid immediately.
SWALLOWING (INGESTION): Drink copious amounts of water, induce vomiting, seek medical aid.
EYES: Flush with running water for at least 15 minutes. If irritation persists, seek medical aid.
SKIN (DERMAL): Flush affected area with water. If irritation persists, seek medical aid.

SECTION VIII EMPLOYEE PROTECTION

RESPIRATORY PROTECTION: Use NIOSH/MSHA approved dust/particulate respirator.
PROTECTIVE CLOTHING: Wear protective clothing to prevent skin contact. Long sleeve shirts or coveralls to minimize skin contact should be worn. In areas of dust concentration, air purifying respirators should be used. In case of fumes, masks with proper canisters or supplied-air respirators should be used. As with all chemicals, gloves should be worn to prevent excessive skin contact.
ADDITIONAL MEASURES: Use local exhaust ventilation to avoid inhaling dust.

SECTION IX - SPILL AND DISPOSAL DATA

SPILL: Take precautions to avoid dusting. Dampen spilled material, collect by vacuum cleaner or shovel and place in labelled container for appropriate disposal.

PAGE 2 of 3
Material Safety Data Sheet
MAGNESIUM ELEKTRON, INC.


SECTION X - TRANSPORTATION DATA

PROPER SHIPPING NAME: Not classified as hazardous by U.S. Department of Transportation
CONSTITUENT: NA
HAZARD CLASS AND LABEL: NA
ID NUMBER: NA
PACKAGING GROUP: NA
REPORTABLE QUANTITY: NA

SECTION XI - OTHER REGULATORY INFORMATION

TSCA STATUS: Tin Oxide (hydrate) is listed under CAS RN 18282-10-5
SARA SECTION 302: This product contains Nitric Acid which is required to be reported in quantities of 1000 lbs and greater.
SARA SECTION 312: This product contains Nitric Acid which is a regulated compound under SARA 312.
SARA SECTION 313: This product may contain Nitric Acid in excess of 1.0% which is regulated under SARA 313.
NFPA HEALTH: 1
NFPA FLAMMABILITY: 0
NFPA REACTIVITY: 0
NFPA OTHER: NA

SECTION XII - PRECAUTIONARY LABEL STATEMENTS

WARNING: Warning - Possible Irritant

SECTION XIII - ADDITIONAL INFORMATION

ADDITIONAL: NA