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Material Safety Data Sheet

Transportation Emergency: 1-800-451-8346

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SECTION 1. ----- CHEMICAL IDENTIFICATION-----

CATALOG #: M050-0-01
NAME: TIN, POWDER

SECTION 2. ----- COMPOSITION/INFORMATION ON INGREDIENTS -----

CAS #: 7440-31-5
MF: Sn = 118.71

SECTION 3. ----- HAZARDS IDENTIFICATION -----

LABEL PRECAUTIONARY STATEMENTS

IRRITANT.
IRRITATING TO EYES AND RESPIRATORY SYSTEM.
COMBUSTIBLE.

HMIS RATING

HEALTH: 2
FLAMMABILITY: 2
REACTIVITY: 1

SECTION 4. ----- FIRST-AID MEASURES-----

ORAL EXPOSURE

IF SWALLOWED, WASH OUT MOUTH WITH WATER PROVIDED PERSON IS CONSCIOUS. CALL A PHYSICIAN.

INHALATION EXPOSURE

IF INHALED, REMOVE TO FRESH AIR. IF NOT BREATHING GIVE ARTIFICIAL RESPIRATION. IF BREATHING IS DIFFICULT, GIVE OXYGEN.

DERMAL EXPOSURE

IN CASE OF CONTACT, IMMEDIATELY WASH SKIN WITH SOAP AND COPIOUS AMOUNTS OF WATER.

EYE EXPOSURE

IN CASE OF CONTACT, IMMEDIATELY FLUSH EYES WITH COPIOUS AMOUNTS OF WATER FOR AT LEAST 15 MINUTES.

SECTION 5. ----- FIRE FIGHTING MEASURES -----

EXPLOSION DATA

DUST POTENTIAL: THIS MATERIAL, LIKE MOST MATERIALS IN POWDER FORM, IS CAPABLE OF CREATING A DUST EXPLOSION.

FLASH POINT

N/A

EXPLOSION LIMITS

LOWER: > 99.99 %

AUTOIGNITION TEMP

N/A

FLAMMABILITY

N/A

EXTINGUISHING MEDIA

SUITABLE: CARBON DIOXIDE, DRY CHEMICAL POWDER, OR APPROPRIATE FOAM.

FIREFIGHTING

PROTECTIVE EQUIPMENT: WEAR SELF-CONTAINED BREATHING APPARATUS AND PROTECTIVE CLOTHING TO PREVENT CONTACT WITH SKIN AND EYES.

SPECIFIC HAZARD(S): EMITS TOXIC FUMES UNDER FIRE CONDITIONS.

SECTION 6. ----- ACCIDENTAL RELEASE MEASURES-----

PROCEDURE(S) OF PERSONAL PRECAUTION(S)

WEAR RESPIRATOR, CHEMICAL SAFETY GOGGLES, RUBBER BOOTS, AND HEAVY RUBBER GLOVES.

METHODS FOR CLEANING UP

SWEEP UP, PLACE IN A BAG AND HOLD FOR WASTE DISPOSAL. AVOID RAISING DUST. VENTILATE AREA AND WASH SPILL SITE AFTER MATERIAL PICKUP IS COMPLETE.

SECTION 7. ----- HANDLING AND STORAGE-----

HANDLING

USER EXPOSURE: DO NOT BREATHE DUST. AVOID CONTACT WITH EYES, SKIN, AND CLOTHING. AVOID PROLONGED OR REPEATED EXPOSURE.

STORAGE

SUITABLE: KEEP TIGHTLY CLOSED. KEEP AWAY FROM HEAT AND OPEN FLAME. HANDLE AND STORE UNDER NITROGEN.

SPECIAL REQUIREMENTS

AIR AND MOISTURE SENSITIVE. HANDLE AND STORE UNDER INERT GAS.

SECTION 8. ----- EXPOSURE CONTROLS/PERSONAL PROTECTION-----

ENGINEERING CONTROLS

SAFETY SHOWER AND EYE BATH. MECHANICAL EXHAUST REQUIRED.

PERSONAL PROTECTIVE EQUIPMENT

RESPIRATORY: USE RESPIRATORS AND COMPONENTS TESTED AND APPROVED UNDER APPROPRIATE GOVERNMENT STANDARDS SUCH AS NIOSH (US) OR CEN (EU). WHERE RISK ASSESSMENT SHOWS AIR-PURIFYING RESPIRATORS ARE APPROPRIATE USE A DUST MASK TYPE N95 (US) OR TYPE P1 (EN 143) RESPIRATOR.

HAND: COMPATIBLE CHEMICAL-RESISTANT GLOVES.

EYE: CHEMICAL SAFETY GOGGLES.

GENERAL HYGIENE MEASURES

WASH THOROUGHLY AFTER HANDLING.

EXPOSURE LIMITS, RTECS

<u>COUNTRY</u>	<u>SOURCE</u>	<u>TYPE</u>	<u>VALUE</u>
USA	ACGIH	TWA	2 mg/m ³ (METAL)
USA	MSHA STANDARD-AIR	TWA	2 mg/m ³
USA	OSHA.	PEL	8H TWA 2 mg(Sn)/m ³
USA	NIOSH	TWA	2 mg/m ³
POLAND		NDS	2 mg/m ³
POLAND		NDSCH	-
POLAND		NDSP	-

SECTION 9. ----- PHYSICAL AND CHEMICAL PROPERTIES -----

APPEARANCE AND ODOR

SOLID

PHYSICAL PROPERTIES

SPECIFIC GRAVITY: 7.3 g/cm³

MELTING POINT: 232 °C

EXPLOSION LIMITS

LOWER: >99.99%

UPPER: N/A

SECTION 10. -----STABILITY AND REACTIVITY -----

STABILITY

STABLE: STABLE.

CONDITIONS OF INSTABILITY: AIR AND MOISTURE SENSITIVE.

MATERIALS TO AVOID: STRONG OXIDIZING AGENTS, SULFUR, STRONG BASES, HALOGENS AVOID CONTACT WITH ACID.

HAZARDOUS DECOMPOSITION PRODUCTS

HAZARDOUS DECOMPOSITION PRODUCTS: TIN/TIN OXIDES.

HAZARDOUS POLYMERIZATION

HAZARDOUS POLYMERIZATION: WILL NOT OCCUR

SECTION 11. ----- TOXICOLOGICAL INFORMATION -----

ROUTE OF EXPOSURE

SKIN CONTACT: MAY CAUSE SKIN IRRITATION.

SKIN ABSORPTION: MAY BE HARMFUL IF ABSORBED THROUGH THE SKIN.

EYE CONTACT: CAUSES EYE IRRITATION.

INHALATION: MAY BE HARMFUL IF INHALED. MATERIAL IS IRRITATING TO MUCOUS MEMBRANES AND UPPER RESPIRATORY TRACT.

INGESTION: MAY BE HARMFUL IF SWALLOWED.

SIGNS AND SYMPTOMS OF EXPOSURE

TO THE BEST OF OUR KNOWLEDGE, THE CHEMICAL, PHYSICAL, AND TOXICOLOGICAL PROPERTIES HAVE NOT BEEN THOROUGHLY INVESTIGATED.

CHRONIC EXPOSURE - CARCINOGEN

SPECIES: RAT

ROUTE OF APPLICATION: IMPLANT

DOSE: 395 g/kg

RESULT: TUMORIGENIC: EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA. TUMORIGENIC: TUMORS AT SITE OR APPLICATION.

SPECIES: MOUSE
ROUTE OF APPLICATION: IMPLANT
DOSE: 840 g/kg
RESULT: TUMORIGENIC:TUMORS AT SITE OR APPLICATION.
TUMORIGENIC:EQUIVOCAL TUMORIGENIC AGENT BY RTECS CRITERIA.

SECTION 12. ----- ECOLOGICAL INFORMATION -----

DATA NOT YET AVAILABLE.

SECTION 13. ----- DISPOSAL CONSIDERATIONS -----

APPROPRIATE METHOD OF DISPOSAL OF SUBSTANCE OR PREPARATION
CONTACT A LICENSED PROFESSIONAL WASTE DISPOSAL SERVICE TO DISPOSE
OF THIS MATERIAL. DISSOLVE OR MIX THE MATERIAL WITH A COMBUSTIBLE
SOLVENT AND BURN IN A CHEMICAL INCINERATOR EQUIPPED WITH AN
AFTERBURNER AND SCRUBBER. OBSERVE ALL FEDERAL, STATE, AND LOCAL
ENVIRONMENTAL REGULATIONS.

SECTION 14. ----- TRANSPORT INFORMATION -----

DOT
UNRESTRICTED

SECTION 15. ----- REGULATORY INFORMATION -----

EU ADDITIONAL CLASSIFICATION
SYMBOL OF DANGER: Xi
INDICATION OF DANGER: IRRITANT.
R: 36/37
RISK STATEMENTS: IRRITATING TO EYES AND RESPIRATORY SYSTEM.
S: 26
SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE
IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
US CLASSIFICATION AND LABEL TEXT
INDICATION OF DANGER: IRRITANT.
RISK STATEMENTS: IRRITATING TO EYES AND RESPIRATORY SYSTEM.
SAFETY STATEMENTS: IN CASE OF CONTACT WITH EYES, RINSE
IMMEDIATELY WITH PLENTY OF WATER AND SEEK MEDICAL ADVICE.
US STATEMENTS: COMBUSTIBLE.
UNITED STATES REGULATORY INFORMATION
TSCA INVENTORY ITEM: YES

SECTION 16. ----- OTHER INFORMATION-----

THE ABOVE INFORMATION IS BELIEVED TO BE CORRECT BUT DOES NOT PURPORT TO
BE ALL INCLUSIVE AND SHALL BE USED ONLY AS A GUIDE. SYNQUEST LABS, INC. SHALL
NOT BE HELD LIABLE FOR ANY DAMAGE RESULTING FROM HANDLING
OR FROM CONTACT WITH THE ABOVE PRODUCT.