



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

DATE OF LAST REVISION: 04-15-99

CHEMICAL IDENTITY

LABEL IDENTITY	TANTALUM OXIDE		
CHEMICAL NAME/SYNONYMS	TANTALUM PENTOXIDE, TANTALUM (V) OXIDE		
FORMULA	Ta₂O₅		
CHEMICAL FAMILY	METAL OXIDE		
HAZARDOUS INGREDIENTS	TANTALUM OXIDE		
%: 100	CAS: 1314-61-0	TLV: 5MG/M3 (as Ta)	OSHA/PEL: 5mg/m3 (as Ta)

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	White powder; odorless
BOILING POINT	ND
DENSITY (gm/cc)	8.2
VAPOR PRESSURE @ 20°	NA
% VOLATILE BY VOLUME (%)	NA
REACTION WITH WATER	None
EVAPORATION RATE (H ₂ O=1)	NA
SOLUBILITY IN WATER	Insoluble
MELTING POINT	1872 ± 10

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (°C)	NA
FLAMMABILITY	Non-flammable
EXTINGUISHING MEDIA	Use dry chemical, CO₂.
SPECIAL FIRE FIGHTING PROCEDURES	Wear a self-contained breathing apparatus and full protective clothing to prevent contact with skin and eyes.
UNUSUAL FIRE & EXPLOSION HAZARDS	May generate toxic fumes if involved in a fire.

HEALTH HAZARD INFORMATION

TOXICITY DATA	ori-rat LD50: 8000mg/kg	<u>Ta data:</u>	imp-rat TDLO: 3760mg/kg
HMIS RATING:			
HEALTH: 1*	FLAMMABILITY: 0	REACTIVITY: 0	PERSONAL PROTECTION: E
ROUTES OF ENTRY: INHALATION: Yes	SKIN: Yes	INGESTION: Yes	



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MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: **Respiratory Disorders**
EFFECTS OF OVEREXPOSURE (acute and chronic):

INHALATION: **May cause pulmonary irritation. Coughing or sneezing may result.**

DERMAL/EYE: **mild irritation/ inflammation, watering, or inflammation may result.**

OTHER: **Tantalum metal is an experienced equivocal tumorigenic agent. Some industrial skin injuries from tantalum have been reported. However, systemic industrial poisoning is apparently not known. Low oral activity.**

CARCINOGENICITY: **None** NTP: **No** IARC MONOGRAPHS: **No** OSHA REGULATE: **No**

EMERGENCY FIRST AID PROCEDURES:

INGESTION: **Administer 1-2 glasses water or milk and induce vomiting, seek medical attention.**

INHALATION: **Remove to fresh air, administer oxygen if breathing is difficult. Seek medical attention.**

SKIN CONTACT: **Wash affected area with soap and water, seek medical attention**

EYE CONTACT: **Flush eyes for at least 15 minutes with lukewarm water, seek medical.**

REACTIVITY DATA

STABILITY	Stable
CONDITIONS CONTRIBUTING TO UNSTABILITY	Heat
INCOMPATIBILITY (MATERIALS TO AVOID)	ClF3, BrF3, Li
HAZARDOUS DECOMPOSITION PRODUCTS	Ta, Ta2O5
HAZARDOUS POLYMERIZATION	Will Not Occur
CONDITIONS TO AVOID	High heat, incompatible materials

SAFE HANDLING AND USE

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

Wear self-contained breathing apparatus and full protective clothing, Isolate the area where the spill occurred and insure proper ventilation is available.

WASTE DISPOSAL METHOD:

Consult federal, state and local regulations for proper disposal.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION	NIOSH approved dust-mist-fume respirator
LOCAL EXHAUST	Maintain below TLV for tantalum
MECHANICAL (general)	Recommended
SPECIAL	NA
PROTECTIVE GLOVES	Neoprene
EYE PROTECTION	Safety glasses



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OTHER PROTECTIVE EQUIPMENT

Wear protective clothing to prevent contamination of skin and clothes

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

Store in tightly closed container, store away from heat and incompatible materials, wash hands and face thoroughly after handling and before meals.

TRANSPORTATION REQUIREMENTS

DOT CLASS: **Not Classified**
UN NUMBER: **NC**
IMCO CLASS: **NC**
OTHER: ---

PRECAUTIONARY LABELING

NONE

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NA= NOT APPLICABLE

ND= NO DATA FOUND