



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

DATE OF LAST REVISION: 02-04-07

CHEMICAL IDENTITY

LABEL IDENTITY	TUNGSTEN METAL
CHEMICAL NAME/SYNONYMS	TUNGSTEN METAL
FORMULA	W
CHEMICAL FAMILY	METAL
HAZARDOUS INGREDIENTS	TUNGSTEN
%: 100 CAS: 7440-33-7 TLV: 5 mg/m3 OSHA/PEL: 5mg/m3	

PHYSICAL AND CHEMICAL PROPERTIES

COLOR, FORM AND ODOR	Silver-grey to black in color. Odorless.
BOILING POINT	5927
DENSITY (gm/cc)	19.3
VAPOR PRESSURE @ 20°	1 @21 C
% VOLATILE BY VOLUME (%)	0
REACTION WITH WATER	None
EVAPORATION RATE (H20=1)	NA
SOLUBILITY IN WATER	Insoluble
MELTING POINT	3410

FIRE AND EXPLOSION HAZARD DATA

FLASH POINT	NA
AUTOIGNITION TEMPERATURE (° C)	ND
FLAMMABILITY	Weak fire hazard. Dust is flammable.
EXTINGUISHING MEDIA	Dry chemical. Cover burning material with an inert substance, such as dry sand, salt, or limestone to exclude oxygen.
SPECIAL FIRE FIGHTING PROCEDURES	Wear NIOSH/MSHA approved self-contained breathing apparatus and full protective clothing.
UNUSUAL FIRE & EXPLOSION HAZARDS	Weak fire and explosion hazard depending on particulate size and dispersion in air. Dust is flammable when exposed to flame.
GENERAL HAZARDS:	Tungsten powder may present a fire or explosion hazard under favoring conditions of particle size, dispersion, and strong ignition source.



TUNGSTEN MATERIAL SAFETY DATA SHEET

HEALTH HAZARD INFORMATION

TOXICITY DATA: Most studies have shown Tungsten to be toxicologically inert. Dust inhalation may cause irritation of the nose and throat. Skin and eye contact may cause irritation due to abrasive action of the dust. Mildly toxic by an unspecified route. Experimental teratogen and reproductive effects.

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

MEDICAL CONDITIONS AGGRAVATED BY OVEREXPOSURE: Chronic: Possible pulmonary fibrosis.

EFFECTS OF OVEREXPOSURE (acute and chronic):
INHALATION: Two Russian studies found signs of pulmonary fibrosis in some workers exposed to Tungsten Trioxide and Tungsten Carbide.
DERMAL/EYE: Dust may cause irritation to eyes. Abrasive action of the dust may cause skin irritation.
INGESTION: No adverse affects are likely.

CARCINOGENICITY: No NTP: No IARC MONOGRAPHS: No OSHA REGULATE: No

EMERGENCY FIRST AID PROCEDURES:

INGESTION: If a substantial quantity of Tungsten is swallowed, give person (if conscious) a large quantity of water to drink, induce vomiting, and 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 and water. Prevent further contact with the dust. If irritation persists, seek medical attention.
EYE CONTACT: If irritation occurs, flush eye(s) with copious amounts of water for 15 minutes. Seek medical attention.

REACTIVITY DATA

STABILITY	Stable
INCOMPATIBILITY (MATERIALS TO AVOID)	Strong acids, Halogens, fluorine gas at room temperature
HAZARDOUS DECOMPOSITION PRODUCTS	Will form trioxide when heated.
HAZARDOUD POLYMERZATION	Will Not Occur
CONDITIONS TO AVOID	Exposure to air



TUNGSTEN MATERIAL SAFETY DATA SHEET

SAFE HANDLING AND USE

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

Wearing full protective clothing, isolate the area and insure proper ventilation. Vacuum up spill and place in a container for proper disposal.

WASTE DISPOSAL METHOD:

In accordance with regulations.

SPECIAL PROTECTIVE INFORMATION

RESPIRATORY PROTECTION
LOCAL EXHAUST

**NIOSH/MSHA approved respirator
Recommended when dust levels are
excessive.**

MECHANICAL (general)

Recommended

SPECIAL

None

OTHER

NA

PROTECTIVE GLOVES

Rubber gloves

EYE PROTECTION

Safety glasses with side shields

OTHER PROTECTIVE EQUIPMENT

**Maintain sink, safety shower and eyewash
fountain in the work area. Wear full
protective clothing at all times.**

SPECIAL PRECAUTIONS

PRECAUTIONS TO BE TAKEN IN HANDLING/STORAGE:

**Store in tightly closed containers in a cool, dry place. Wash hands and face
thoroughly. Avoid breathing dust.**

TRANSPORTATION REQUIREMENTS

DOT CLASS: **Not Classified**

UN NUMBER: **NC**

IMCO CLASS: **NC**

OTHER: **---**

PRECAUTIONARY LABELING

NONE

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