

ACCORDING TO US CFR 1910.1200

**SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING****1.1 Product identifier**

Product Name Tungsten Powder  
Synonyms Passivated Tungsten Powder  
Chemical Name Tungsten (W)  
CAS No. 7440-33-7  
Product code 27109, 30039, 30101, 30157, 40523, 60012

**1.2 Relevant identified uses of the substance or mixture and uses advised against**

Identified Use(s) For applications in laser-based additive manufacturing technologies (SLS, DMLS and SLM) and cold spray applications.

Uses Advised Against Not known.

**1.3 Details of the supplier of the safety data sheet**

Manufacturer/Supplier Tekna Advanced Materials Inc.  
Company Identification 2895, Industrial Blvd.  
Address of Manufacturer Sherbrooke, QC,  
Canada.  
Postal code J1L 2T9  
Telephone (819) 820-7771  
E-mail sds@tekna.com

**1.4 Emergency telephone number**

Company (819) 820-7771  
Emergency Phone No. CANUTEC: 1-888-CAN-UTEC (226-8832), 613-996-6666 or \*666 on a cell phone

**SECTION 2: HAZARDS IDENTIFICATION****2.1 Classification of the substance or mixture**

US CFR 1910.1200 Not classified as dangerous for supply/use.

**2.2 Label elements**

According to US CFR 1910.1200  
Product Name Tekna Tungsten Powder  
Hazard Pictogram(s) None.  
Signal Word(s) None.  
Hazard Statement(s) None.  
Precautionary Statement(s) None.

**2.3 Other hazards**

None known.

**2.4 Additional Information**

None.

**SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS****3.1 Substances**

Ingredients	CAS No.	%W/W	Hazard Statement(s)	Hazard Pictogram(s)
Tungsten	7440-33-7	>99.7	Not classified	

**3.2 Mixtures**

Not applicable.

**SECTION 4: FIRST AID MEASURES****4.1 Description of first aid measures**

Inhalation If breathing is difficult, remove victim to fresh air and keep at rest in a position comfortable for breathing.  
Skin Contact Wash skin with water.  
Eye Contact Flush eyes with water for at least 15 minutes.  
Ingestion Wash out mouth with water.

**4.2 Most important symptoms and effects, both acute and delayed**

None anticipated. Treat symptomatically.

**4.3 Indication of any immediate medical attention and special treatment needed**

Unlikely to be required but if necessary treat symptomatically.

**SECTION 5: FIREFIGHTING MEASURES****5.1 Extinguishing media**

Suitable Extinguishing media Use dry powder to extinguish.  
Unsuitable extinguishing media Do not use water, carbon dioxide.

**5.2 Special hazards arising from the substance or mixture**

Decomposes in a fire giving off toxic fumes: Metal oxides.

**5.3 Advice for firefighters**

Fire fighters should wear complete protective clothing including self-contained breathing apparatus.

**SECTION 6: ACCIDENTAL RELEASE MEASURES**

- 6.1 Personal precautions, protective equipment and emergency procedures**  
Ensure adequate ventilation. Wear protective gloves/protective clothing/eye protection/face protection.
- 6.2 Environmental precautions**  
Do not allow to enter drains, sewers or watercourses.
- 6.3 Methods and material for containment and cleaning up**  
Sweep up spilled substance and remove to safe place. Use vacuum equipment for collecting spilt materials, where practicable. Transfer to a container for disposal.
- 6.4 Reference to other sections**  
See Also Section 8, 13.

**SECTION 7: HANDLING AND STORAGE**

- 7.1 Precautions for safe handling**  
Provide adequate ventilation. Wear protective gloves/protective clothing/eye protection/face protection.
- 7.2 Conditions for safe storage, including any incompatibilities**  
Storage temperature: Ambient.  
Storage life: Stable under normal conditions.  
Incompatible materials: Acids, Oxidizing agents, Halogens, Sulphur, Ammonia.
- 7.3 Specific end use(s)**  
For applications in laser-based additive manufacturing technologies (SLS, DMLS and SLM) and cold spray applications.

**SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION**

- 8.1 Control parameters**  
8.1.1 Occupational Exposure Limits

SUBSTANCE	CAS No.	LTTEL (8 hr TWA ppm)	LTTEL (8 hr TWA mg/m <sup>3</sup> )	STEL (ppm)	STEL (mg/m <sup>3</sup> )	Note
Tungsten	7440-33-7		3			ACGIH TLV, R

ACGIH TLV: The American Conference of Governmental Industrial Hygienists (ACGIH®) Threshold Limit Values (TLVs®), 2021

R: Measured as respirable fraction of the aerosol.

**8.2 Exposure controls**

- 8.2.1. Appropriate engineering controls: Provide adequate ventilation, including appropriate local extraction.  
8.2.2. Personal protection equipment



Eye Protection: Wear suitable eye/face protection.



Skin protection: Wear suitable gloves. Breakthrough time of the glove material: refer to the information provided by the gloves' producer.



Respiratory protection: Where engineering controls are not fitted or inadequate wear suitable respiratory protective equipment.



Thermal hazards: Not applicable.

- 8.2.3. Environmental Exposure Controls: Do not allow to enter drains, sewers or watercourses.

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

**9.1 Information on basic physical and chemical properties**

- Appearance: Solid.  
Color: Grey, Black.
- Odor: Odourless.
- Odor threshold: Not known.
- pH: Not known.
- Melting point/freezing point: 6170 °F
- Initial boiling point and boiling range: 10220 °F

Flash Point	Not applicable.
Evaporation rate	Not applicable.
Flammability (solid, gas)	Not applicable.
Upper/lower flammability or explosive limits	Not applicable.
Vapor pressure	Not applicable.
Vapor density	Not applicable.
Density (g/ml)	Not available.
Relative density	Not available.
Solubility(ies)	Solubility (Water) : Insoluble in water. Solubility (Other) : Not known.
Partition coefficient: n-octanol/water	Not applicable.
Auto-ignition temperature	Not available.
Decomposition Temperature (°C)	Not available.
Viscosity	Not applicable.
Explosive properties	Not explosive.
Oxidizing properties	Not oxidizing.
<b>9.2 Other information</b>	
Molecular weight	183.84 g/mol

**SECTION 10: STABILITY AND REACTIVITY****10.1 Reactivity**

Stable under normal conditions.

**10.2 Chemical Stability**

Stable under normal conditions.

**10.3 Possibility of hazardous reactions**

No hazardous reactions known if used for its intended purpose.

**10.4 Conditions to avoid**

Heat and direct sunlight.

**10.5 Incompatible materials**

Acids, Oxidizing agents, Halogens, Sulphur, Ammonia.

**10.6 Hazardous decomposition products**

No hazardous decomposition products known.

**SECTION 11: TOXICOLOGICAL INFORMATION****11.1 Information on toxicological effects**

Acute toxicity - Ingestion	Low oral toxicity. LD50 (rat) > 2000 mg/kg
Acute toxicity - Skin Contact	Low acute toxicity. LD50 (rat) > 2000 mg/kg
Acute toxicity - Inhalation	Low acute toxicity.
Skin corrosion/irritation	Non-irritant. Skin and eye irritation studies of sufficient quality and tested in accordance with standard methodology indicated that tungsten metal was not irritating to skin.
Serious eye damage/irritation	Non-irritant.
Skin sensitization data	It is not a skin sensitizer.
Respiratory sensitization data	None anticipated.
Germ cell mutagenicity	There is no evidence of mutagenic potential.
Carcinogenicity	No evidence of carcinogenicity.
Reproductive toxicity	No evidence of reproductive effects.
Lactation	Not classified.
STOT - single exposure	None anticipated.
STOT - repeated exposure	None anticipated.
Aspiration hazard	Not classified.

**11.2 Other information**

None.

**SECTION 12: ECOLOGICAL INFORMATION****12.1 Toxicity**

Toxicity - Aquatic invertebrates	Low toxicity to invertebrates.
Toxicity - Fish	Low toxicity to fish.
Toxicity - Algae	Low toxicity to algae.
Toxicity - Sediment Compartment	Not classified.
Toxicity - Terrestrial Compartment	Not classified.

**12.2 Persistence and degradability**

The methods for determining the biological degradability are not applicable to inorganic substances.

**12.3 Bioaccumulative potential**

No aquatic or terrestrial bioaccumulation data of sufficient quality were available specifically on tungsten metal (target substance).

**12.4 Mobility in soil**

Insoluble in water. The substance is predicted to have low mobility in soil.

**12.5 Other adverse effects**

None.

**SECTION 13: DISPOSAL CONSIDERATIONS****13.1 Waste treatment methods**

Recover or recycle if possible.

**13.2 Additional Information**

Disposal should be in accordance with local, state or national legislation.

**SECTION 14: TRANSPORT INFORMATION****Not classified as hazardous for transport.****14.1 UN number**

Not applicable

**14.2 UN proper shipping name**

Not applicable

**14.3 Transport hazard class(es)**

Not applicable

**14.4 Packing group**

Not applicable

**14.5 Environmental hazards**

Not classified as a Marine Pollutant.

**14.6 Special precautions for user**

Not known

**14.7 Transport in bulk according to Annex II of Marpol and the IBC Code**

Not known

**SECTION 15: REGULATORY INFORMATION****15.1 US Federal Regulations**

Toxic and hazardous substances (29 CFR 1910; Subpart Z)	Not listed
National emission standards for hazardous air pollutants (40 CFR 61.01)	Not listed
SARA Title III Section 313	Not listed
TSCA (Toxic Substance Control Act)	Listed : 7440-33-7 (Active)
CAA 602 - Ozone Depleting Substances (ODS)	Not listed

**15.2 US State Regulations**

State Right to Know Lists	
Proposition 65 (California)	Not listed
Minnesota	Listed : 7440-33-7
New Jersey	Listed : 7440-33-7
Pennsylvania	Listed : 7440-33-7
Rhode Island	Listed : 7440-33-7

**15.3 Other**

OSPAR List of Chemicals for Priority Action	Not listed
OSHA (List of Highly Hazardous Chemicals, Toxics and Reactives)	Not listed
NTP (National Toxicology Program )	Not listed
IARC (International Agency for Research on Cancer )	Not listed

**SECTION 16: OTHER INFORMATION**

The following sections contain revisions or new statements: 1

**LEGEND**

## Acronyms

CAS : Chemical Abstracts Service  
LTEL : Long term exposure limit  
STEL : Short term exposure limit  
STOT : Specific Target Organ Toxicity

Key literature references and sources for data used to compile the SDS

US CFR 1910.1200

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