

## SAFETY DATA SHEET (SDS)

According to WHMIS 2015

### TUNGSTEN METAL (PELLETS)

1. PRODUCT AND COMPANY IDENTIFICATION	
Product name (IUPAC):	Tungsten metal
Other means of identification:	Wolfram
Chemical formula:	W
CAS REGISTRY NUMBER	[7440-33-7]
Recommended use and commercial applications:	Scientific research and development, chemical industry, metallurgical industry, electrical industry.
Manufacturer/Supplier	<b>ELECTROCHEM TECHNOLOGIES &amp; MATERIALS INC.</b>
Address	<p><u>HEAD OFFICE</u></p> <p>Street: 2037 AIRD AVENUE, SUITE 201                      City: MONTREAL                      Province/State: QUEBEC                      Postal/Zip Code: H1V 2V9                      Country: CANADA                      Telephone: <b>+1 (514) 251-9909 (9:00pm-5:00pm)(Monday-Friday)</b>                      Email: <a href="mailto:contact@electrochem-technologies.com">contact@electrochem-technologies.com</a></p> <p><u>MANUFACTURING SITE</u></p> <p>Street: 75 BOULEVARD DE MORTAGNE C.P. 112                      City: BOUCHERVILLE                      Province/State: QUEBEC                      Postal/Zip Code: J4B 6Y4                      Country: CANADA</p>
Emergency numbers TRANSPORT ONLY (24 hours/7 days)	CANADA: <b>CANUTEC</b> +1-613-996-6666
2. HAZARDS IDENTIFICATION	
GHS Classification of the substance or mixture	<b>This substance is not classified as a dangerous substance or mixture according to the Globally Harmonized System (GHS)</b>
Pictogram(s)	<b>Not applicable</b>
Signal Word (s):	<b>Not applicable</b>
Hazard Statements:	<b>Not applicable</b>
Precautionary Statements:	<b>Not applicable</b>
3. COMPOSITION	
Chemical family:	Tungsten chemicals

Synonyms, generic names, acronyms:		Tungsten metal			
	NAME	CAS No	Mass percentage	EINECS number	
	Tungsten	[7440-33-7]	≤100 wt.%	231-143-9	
<b>4. FIRST AID PROCEDURES</b>					
General Treatment:		No special measures required			
Special Treatment:		None			
Important Symptoms:		None			
After inhalation:		Seek medical treatment in case of complaints.			
Ingestion:		Seek medical treatment in case of complaints.			
Skin contact:		Generally the product does not irritate the skin.			
Eye contact:		Flush eyes with water, blinking often for several minutes. Remove contact lenses if present and easy to do. Continue rinsing. Then consult a physician if required.			
<b>5. FIREFIGHTING MEASURES</b>					
Flammability:		Bulk product is not flammable but fine dust can become flammable			
Extinguishing Media:		Use dry powder extinguishing agent designed for metal fires. Do not use water, or carbon dioxide.			
Special hazards arising from the combustion of the substance		Dust from this product may be a fire hazard when exposed to high temperatures or ignition sources. Particle size and dispersion in air determine combustion reactivity. If this product is involved in a fire, tungsten oxides can be released.			
Special Fire Fighting Procedure:		Use full-face, self-contained breathing apparatus with full protective impervious clothing to prevent contact with skin and eyes.			
<b>6. ACCIDENTAL RELEASE MEASURES</b>					
If Material Is Released/Spilled:		Personal protective equipment and emergency procedures not required			
Environmental Precautions:		Do not allow product to be released in the environment without governmental permits.			
<b>7. HANDLING AND STORAGE</b>					
Handling Conditions:		Keep containers tightly sealed.			
Storage Conditions:		Store in a cool, dry place inside a tightly sealed container.			
Sensitivities:		Not applicable			
Work/Hygienic Maintenance:		Do not use tobacco or food in work area. Wash thoroughly before eating and smoking. Do not blow dust off clothing or skin with compressed air.			
Ventilation:		Provide sufficient ventilation to maintain concentration at or below threshold limit.			
<b>8. EXPOSURE CONTROLS AND PERSONAL PROTECTION</b>					

Permissible Exposure Limits:	ACGIH TLV (mg/m <sup>3</sup> ) [USA]		EL (mg/m <sup>3</sup> )[CANADA]	
	TWA	STEL	Long-term	Short-term
	1	3	5	10
Threshold Limit Value:	5 mg/m <sup>3</sup> as W, long-term value			
Special Equipment:	Not applicable			
Respiratory Protection:	Not required			
Protective Gloves:	Impervious gloves			
Eye Protection:	Safety glasses or goggles			
Body Protection:	Protective work clothing. Wear close-toed shoes and long sleeves/pants. Wash hands before breaks and at the end of the work shift.			
<b>9. PHYSICAL AND CHEMICAL PROPERTIES</b>				
Form:	Solid			
Color:	Metallic gray			
Odor:	Odorless			
Melting/Freezing point:	3410°C			
Boiling point:	5900°C			
pH (20°C):	Not applicable			
Flammability:	Not applicable			
Lower and upper explosion limits:	Not applicable			
Flash point:	Not applicable			
Auto ignition temperature:	Not applicable			
Decomposition temperature:	Not determined			
Solubility in/Miscibility with water:	Not applicable			
Partition coefficient n-octanol/water:	Not applicable			
Vapor pressure (20°C):	Not applicable			
Mass density (20°C):	19,300 kg/m <sup>3</sup> (1,205 lb./ft <sup>3</sup> )			
Bulk density (20°C):	12,000 kg/m <sup>3</sup> (1,205 lb./ft <sup>3</sup> )			
Kinematic viscosity:	Not applicable			
Relative molar mass ( <sup>12</sup> C = 12):	183.84			
Oxidizing properties:	Non oxidizing			
Particle characteristics:	Pellets			
<b>10. STABILITY AND REACTIVITY</b>				
Stability:	Stable under recommended storage conditions			
Reacts With:	Strong acids.			
Incompatibility:	Strong acids.			
Conditions to avoids:	No further information			

Hazardous Decomposition Products: Tungsten oxides

**11. TOXICOLOGICAL INFORMATION**

Acute toxicity: The registry of Toxic Effects of Chemical Substances (RTECS) contains acute toxicity data for this substance

RTECS Reference: Not available

Target Organs: Not Available

Potential Health Effects:

Eyes: No irritant effects

Skin: No irritant effects

Ingestion: No irritant effects

Inhalation: No irritant effects

Sensitization: No sensitizing effects known

Signs and Symptoms: No effects known.

Aggravated Medical Conditions: No effects known.

Median Lethal Dose: No effects known.

Carcinogenicity: No classification data on carcinogenic properties of this material is available from the ECHA, EPA, IARC, OSHA or ACGIH

**12. ECOLOGICAL INFORMATION**

Aquatic Toxicity: No further relevant information available.

Persistent Bioaccumulation Toxicity: No further relevant information available.

Very Persistent, Very Bioaccumulative: No further relevant information available.

Notes: N/A

Toxicity: No further relevant information available.

Persistence and degradability: No further relevant information available.

Bioaccumulative potential: No further relevant information available.

Mobility in soil: No further relevant information available.

PBT and vPvB assessment: Not Applicable.

Other adverse effects: No further relevant information available.

**13. DISPOSAL CONSIDERATIONS**

Product, as supplied, should be disposed of in accordance with the regulations issued by the appropriate federal, state and local authorities. Same consideration should be given to containers and packaging. Contact a licensed professional waste disposal service. Dispose of in accordance with federal, state, provincial, local, national, and international enforced environmental regulations.

**14. TRANSPORTATION DATA**

Hazardous: Not hazardous for transportation.

Hazard Class: Not Applicable

Packing Group: Not Applicable

UN Number: Not Applicable

Proper Shipping Name: Not Applicable

**DOT**

UN/ID No	Not Regulated
Proper Shipping Name:	Not Regulated
Hazard Class:	Not Regulated
Packing Group:	Not Regulated

**IATA**

UN/ID No	Not Regulated
Proper Shipping Name:	Not Regulated
Hazard Class:	Not Regulated
Packing Group:	Not Regulated

**TDG**

UN/ID No	Not Regulated
Proper Shipping Name:	Not Regulated
Hazard Class:	Not Regulated
Packing Group:	Not Regulated

**IMDG**

UN/ID No	Not Regulated
Proper Shipping Name:	Not Regulated
Hazard Class:	Not Regulated
Packing Group:	Not Regulated

**ICAO(Air)**

UN/ID No	Not Regulated
Proper Shipping Name:	Not Regulated
Hazard Class:	Not Regulated
Packing Group:	Not Regulated

**15. REGULATORY INFORMATION****United States (USA):**

Toxic Substance Control Act (TSCA):	Listed
Superfund Amendments and Reauthorization Act (SARA 302 Extremely Hazardous):	Not listed
Superfund Amendments and Reauthorization Act (SARA Sec 304 Reportable Quantities)	Not listed
Superfund Amendments and Reauthorization Act (SARA 311/312)	Not listed
Superfund Amendments and Reauthorization Act (SARA 313 Toxic Chemicals):	Not listed

**European Union (EU):**

European Inventory of Existing Chemical Substances (EINECS):	231-143-9
Risk Statements:	Not Available
Safety Statements:	Not Available
Substance of Very High Concern (SVHC) [REACH Regulations (EC) No. 1907/2006]:	Not listed

**Canada:**

Canadian Domestic Substances List (DSL):	Listed
Canadian Non-Domestic Substances List (NDSL):	Not listed

**16. Other Information**

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