

LINCOLN ELECTRIC® TUNGSTEN ELECTRODES

Premium Tungsten for Any Application



Shown:
KP4721-332, KP4722-332 & KP4723-332

KEY FEATURES

The Lincoln Electric Tungsten Electrodes deliver premium expendable performance for TIG welding, no matter the application.

- **Improved Arc Performance** – Premium, consistent chemical composition to provide exceptional arc starts and re-starts while preventing arc wander.
- **Minimized Oxide Build-Up** – Oxide build-up on competitive tungsten electrodes creates burrs on the end of the rod, which can lead to an unstable arc. Our Tungsten Electrodes minimize oxide build-up, resulting in less time grinding, improving performance and productivity.
- **Comprehensive Product Line** – Available types include 2% Lanthanated, 2% Ceriated and WX Multi Oxide; each offered in multiple diameters to provide a strategic tungsten solution for all amperages and both AC & DC currents.

Process » TIG/GTAW

Applications »

Aerospace
Motorsports
Shipbuilding
Education
Fabrication

Product Number »

- » 2% Lanthanated:
KP4721-XXX
- » 2% Ceriated:
KP4722-XXX
- » WX Multi-Oxide:
KP4723-XXX

TUNGSTEN SELECTION

The tungsten electrode type is indicated by the color on the top of the tungsten electrode.

<p>Grey 2% Ceriated EWCe-2</p> <p>Amperage Range: Performs best at low to medium amperages</p> <p>Current: Primarily used with DC but can be used with AC</p> <p>Performance Over Time: Very consistent initial performance but will start to degrade after medium usage due to grain growth</p>	<p>Blue 2% Lanthanated EWLa-2</p> <p>Amperage Range: Performs best at medium to high amperages</p> <p>Current: Consistent DC & AC performance</p> <p>Performance Over Time: Great long term performance due to resistance from grain growth and contamination</p>	<p>Purple WX Multi-Oxide 98.34% W + 1.5% La2O3 + .08% Y2O3 + .08% ZrO2</p> <p>Amperage Range: Excellent performance at all amperages</p> <p>Current: Excellent AC & DC performance</p> <p>Performance Over Time: Best performance & longevity due to reduced heat generation and enhanced resistance to contamination and grain growth</p> <p>Non-radioactive composition is an excellent replacement for Thoriated Tungsten</p>
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TUNGSTEN SHARPENING TECHNIQUES



In .020"-1/16" diameter tungsten, use a sharp point for low amperage arc starts and very thin materials.



Use a sharp point with a small blunt for most DC applications for 1/16" diameter tungsten and larger.



Do not use short tip angle as it can cause arc wander



To reduce common issues such as arc wander and inclusions, use a length wise grinding pattern.

TYPICAL OPERATING PROCEDURES BY TUNGSTEN DIAMETER

Tungsten Diameter in (mm)	Amperage (DC-)	Amperage (AC 50/50 Balance)	Amperage (AC +70/-30 Balance)
.020 (0.5)	2 - 20 A	2 - 15 A	2 - 15 A
.040 (1.0)	10 - 75 A	25 - 75 A	25 - 80 A
1/16 (1.6)	60 - 150 A	40 - 110 A	40 - 115 A
3/32 (2.4)	150 - 250 A	65 - 150 A	60 - 175 A
1/8 (3.2)	225 - 330 A	75 - 170 A	75 - 250 A
5/32 (4.0)	330 - 480 A	85 - 210 A	85 - 310 A

PRODUCT SPECIFICATIONS

Classification	Color	Diameter in. (mm)	Part Number	QTY
2% Lanthanated	Blue	.020 (0.5)	KP4721-020	10 per Pack
		.040 (1.0)	KP4721-040	
		1/16 (1.6)	KP4721-116	
		3/32 (2.4)	KP4721-332	
		1/8 (3.2)	KP4721-18	
		5/32 (4.0)	KP4721-532	
2% Ceriated	Grey	.020 (0.5)	KP4722-020	
		.040 (1.0)	KP4722-040	
		1/16 (1.6)	KP4722-116	
		3/32 (2.4)	KP4722-332	
		1/8 (3.2)	KP4722-18	
		5/32 (4.0)	KP4722-532	
WX Multi-Oxide	Purple	.020 (0.5)	KP4723-020	
		.040 (1.0)	KP4723-040	
		1/16 (1.6)	KP4723-116	
		3/32 (2.4)	KP4723-332	
		1/8 (3.2)	KP4723-18	
		5/32 (4.0)	KP4723-532	

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THE LINCOLN ELECTRIC COMPANY

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