

## TUNGSTEN

### 2% Thoriated Red

**Description :**

2% Thoriated Tungsten contains a nominal 2 wt-% or thorium oxide (ThO<sub>2</sub>) that is evenly dispersed throughout the entire length of the Tungsten. The most common type of Tungsten used today, provides excellent resistance from weld pool contamination while at the same time offers the welder easier arc starting capabilities and more stable arc. Generally used for DC electrode negative or straight polarity applications such as carbon & stainless steels, nickel alloys and titanium.

### 2% Lanthanated Blue / 1.5% Lanthanated Gold

**Description :**

2% Lanthanated or "rare earth" Tungsten contains a nominal 2wt-% Lanthanum oxide (LaO<sub>3</sub>). This type of Tungsten is very similar to ceriated as it too is a non-radioactive material. Lanthanated electrodes operate at a slightly different arc voltage than Thoriated or Ceriated electrodes. Were developed around the same time as Ceriated Tungsten to help combat the increasing awareness of the radioactivity of Thoriated Tungsten. Generally used to weld carbon and stainless steels, nickel alloys and titanium.

### Pure Tungsten Green

**Description :**

Pure Tungsten contains a minimum of 99.5wt-% Tungsten with no other alloying elements. This allows the tip to form a clean, balled end which provides good arc stability on AC. Pure can be used with DC but does not compare with Thoriated or Ceriated as far as ease of arc starting. More susceptible to weld contamination than Thoriated, Ceriated or Lanthanated. Usually the least expensive of all Tungsten. Pure Tungsten is generally used in the welding of aluminum and magnesium alloys (AC).

### 2% Ceriated Grey

**Description :**

2% Ceriated Tungsten contains a nominal 2wt-% of cerium oxide (CeO<sub>2</sub>). Ceriated is different from Thoriated as it is not a radioactive material. Ceriated Tungsten also tends to last longer than Thoriated and can be used proficiently with AC or DC. In manual applications the Ceriated Tungsten will provide slightly different electrical characteristics than the Thoriated Tungsten but generally no difference will be seen by the operator. generally used to weld carbon & stainless steel, nickel alloy and titanium.

### 0.8% Tungsten White

**Description :**

**Principal Oxide: 0.7-0.9% Zirconium Oxide** . Non-Radioactive. Best for use in alternating current (a/c) for aluminum alloys and magnesium alloys using inverter or transformer based constant current power sources. Balls well, handles higher amperage than pure tungsten with less spitting, better arc starts and arc stability than pure tungsten. Non alloy and low alloy steel, stainless steel, titanium alloy, nickel alloy, copper alloy, anode and cathode of the thermal spraying special light sources, etc.

### E3 Tungsten Purple

**Description :**

Electrodes with rare earth (mixed oxides). In comparison to thoriated electrode is less harmful to the environment and not radioactive. the electrodes offer excellent ignition characteristics and consistent welding properties. They are universal and suitable for all applications in the whole range of DC and AC welding for non-alloyed and high-alloyed steel, aluminum, titanium, nickel, copper and magnesium alloys. Because of their great ignition properties they are also suitable for automated welding. Due to the low electrode temperature, they offer increased current capacity and longer service life than thoriated electrodes.