TECHNOLOGY FOR THE WELDER'S WORLD.

The right choice for you and the environment!

E3® – the ultimate, long-life tungsten electrodes – the future for TIG welding

TIG electrodes E3® (developed by ABICOR BINZEL® – alloy: rare earth) promote best practice for TIG welding – without radioactive doping.

The advantages at a glance:

- The welder is no longer exposed to radiation.
- Reduced environmental impact. Remaining pieces and grinding dust are no longer treated as hazardous.
- No special safeguards required for storage and transport.

All tungsten electrodes are manufactured in accordance with EN ISO 6848. They are produced in-house and imported taking into account all customs duties. Every packet carries a LOT number. Declaration of conformity and safety data sheet freely available, just ask.

ABICOR BINZEL®

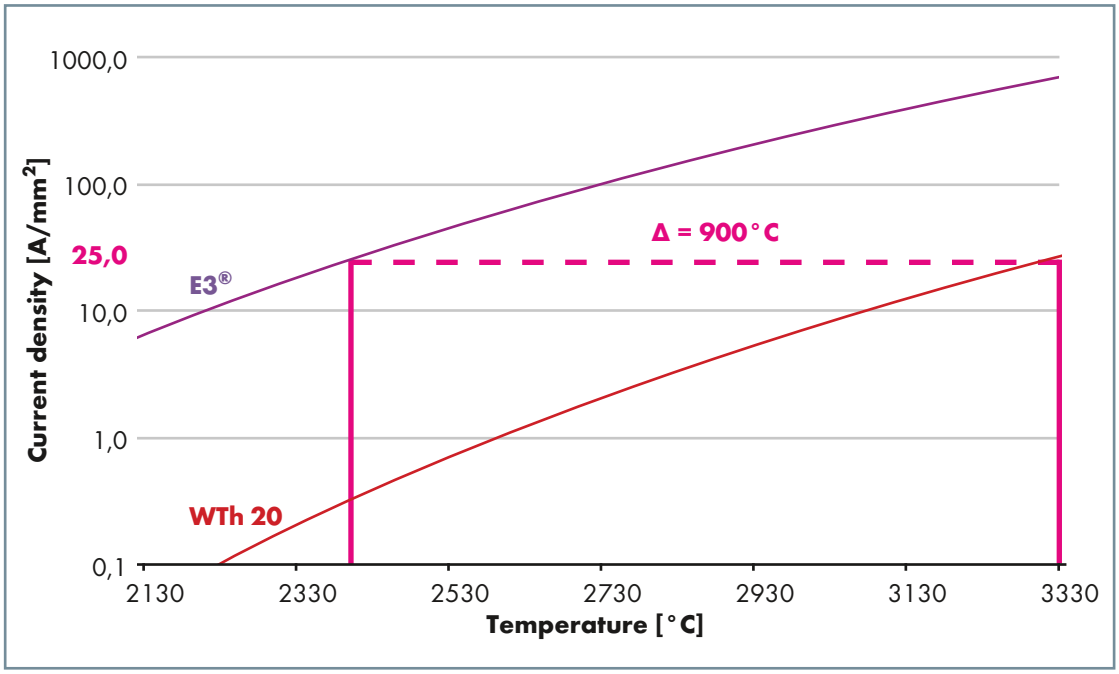
www.binzel-abicor.com

Non-radioactive alternatives
to thoriated tungsten electrodes ...

The advantages of E3® are self-evident:

- Electrode tip remains "cooler" than thoriated types
- Superior repeatable ignition characteristics
- Increased arc stability
- Reduced burn off
- Higher current carrying capacity
- Lower degradation to the electrode tip
- Increased application flexibility

Higher electrical rating



At the same current density E3® electrodes operate at approx. 900 °C less than the WTh electrodes and therefore have a higher current carrying capacity.

Durability by comparison

The heat-effected zone of the electrode tip is visually reduced with E3® electrodes. Accordingly, the burn off of the E3® electrode tips is reduced and the durability increased.

E3®

WTh 20

The visual appearance of the E3® electrodes after 150 ignitions show less erosion than the WTh 20 electrodes after 150 ignitions. E3® electrodes provide improved ignitions even after a longer period of use.

E3®

WTh 20

E3®*

Electrodes with rare earth (mixed oxides). In comparison to thoriated electrodes this 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, aluminium, 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 an increased current carrying capacity and longer service life than thoriated electrodes.
Colour-coding: **E3® = purple**

WLa 10 / 15 / 20

Lanthanated electrodes are suitable for applications in DC and AC welding. Their main areas of application are the welding of non-alloyed and high-alloyed steel, aluminium, titanium, nickel, copper and magnesium alloys. These electrodes are also suitable for the use in micro-plasma welding.
Ignition characteristics are enhanced with increased amounts of lanthanum oxide (La_2O_3). The overall service life and current carrying capacity is lower than the E3® electrodes.
Colour-coding: **WLa 10 = black / WLa 15 = gold / WLa 20 = blue**

WCe 20

By adding cerium oxide (CeO_2), these electrodes have an increased capacity compared to pure tungsten electrodes, however the WCe electrodes have a lower capacity than the E3® and WL electrodes. Main areas of application are in the DC and AC welding of non-alloyed and high-alloyed steel, aluminium, titanium, nickel, copper and magnesium alloys in the low and middle current range.
Colour-coding: **WCe 20 = grey**

WP

Undoped electrodes – consist of pure tungsten. The main area of application for this type of electrode is the AC welding of aluminium alloys with excellent arc stability. The WP-electrodes are not suitable for DC welding.
Colour-coding: **WP = green**

WZr 08

Tungsten electrodes with the addition of zirconium have a lower risk of contaminating the weld from deposits of tungsten. The main area of application for this electrode is AC welding. They are limited in their suitability for DC welding.
Colour-coding: **WZr 08 = white**

Tungsten electrodes per DIN EN ISO 6848 (10 pcs.)

Length: 175 mm **Electrodes-Ø**	E3®* purple	WLa 10 black	WLa 15 gold	WLa 20 blue	WCe 20 grey	WP green	WZr 08 white
1.0 mm	700.0304.10	700.0157	700.1183	700.0219	700.0166	700.0003	700.0028
1.6 mm	700.0306.10	700.0158	700.1184	700.0220	700.0167	700.0007	700.0030
2.0 mm	700.0307.10	700.0159	700.1185	700.0221	700.0168	700.0009	700.0032
2.4 mm	700.0308.10	700.0160	700.1186	700.0222	700.0169	700.0012	700.0034
3.2 mm	700.0310.10	700.0162	700.1187	700.0223	700.0170	700.0016	700.0036
4.0 mm	700.0311.10	700.0163	700.0255	700.0242	700.0171	700.0018	700.0037

* According to DIN EN ISO 6848.

Tungsten electrodes in 150 mm length on demand.

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