

Product Name	Bossweld Lanthanated Tungsten Electrodes, Bossweld 2% Thoriated Tungsten Electrodes, Bossweld Zirconated Tungsten Electrodes, Bossweld Ceriated Tungsten Electrodes and Bossweld Multi Pack Tungsten Electrodes
Part Number	900301, 900302, 900303, 900308, 900310, 900311, 900312, 900313, 900320, 900321, 900322, 900330, 900331, 900332, 900350
Issue Date	14.11.2014

## SECTION 1: IDENTIFICATION

**PRODUCT IDENTIFIER:** Bossweld Lanthanated Tungsten Electrodes, Bossweld 2% Thoriated Tungsten Electrodes, Bossweld Zirconated Tungsten Electrodes, Bossweld Ceriated Tungsten Electrodes and Bossweld Multi Pack Tungsten Electrodes

**PRODUCT CODES:** 900301, 900302, 900303, 900308, 900310, 900311, 900312, 900313, 900320, 900321, 900322, 900330, 900331, 900332, 900350

**SYNONYMS:** n/a

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**RECOMMENDED USE OF THE CHEMICAL AND RESTRICTIONS ON USE:**  
Tungsten Electrodes for TIG and Plasma welding or cutting

## SECTION 2: HAZARD(S) IDENTIFICATION

The product is harmless as it is, Dangers when used:

- A. UV and infrared radiation, heat and noise generated by the electric arc
- B. Fumes/Welding gases
- C. Electric shocks (welding systems)

## SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

Name/ Tip Colour	Chemical Composition	Tungsten %
Thoriated / Red Tip	ThO <sub>2</sub> : 1.70-2.20	≥97.30
Lanthanated / Gold Tip	LaO <sub>2</sub> : 1:30-1:70	≥97.80
Ceriated/ Orange Tip	CeO <sub>2</sub> : 1:80-2.20	≥97.30
Zirconated / White Tip	ZrO <sub>2</sub> : 0:70-0:90	≥98.60

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#### SECTION 4: FIRST AID MEASURES

Area of Exposure	Type of Exposure	First Aid Measures
Eyes	arc glow and/or fumes	Dampen with fresh water and seek medical attention
Skin	burns, erythema	Stop exposure and seek medical attention
Respiratory tract	fumes inhalation	Bring the injured person to a ventilated place and seek medical attention

NOTES TO PHYSICIANS OR FIRST AID PROVIDERS:

#### SECTION 5: FIRE-FIGHTING MEASURES

These products are not inflammable under ordinary conditions and do not present a fire or explosion risk. Welding arc and sparks can ignite combustibles. In case it occurs, it is recommended to shut down power supply immediately. All surfaces of burned area should be covered by dry powder. Do not touch the materials till they completely cool down.

#### SECTION 6: ACCIDENTAL RELEASE MEASURES

ACCIDENTAL RELEASE MEASURES:

Crushing of the product should be avoided.

PERSONAL PRECAUTIONS, PROTECTIVE EQUIPMENT AND EMERGENCY PROCEDURES: None

ENVIRONMENTAL PRECAUTIONS: No necessary or dispose of in accordance with appropriate government regulations.

METHODS AND MATERIALS FOR CONTAINMENT AND CLEANING UP: No special

#### SECTION 7: HANDLING AND STORAGE

- Avoid violent collision considering the brittleness of the tungsten
- Care with the strength of the packing and shelves, tungsten is very heavy in density
- Keep dry. Tungsten is stable in chemical, but the ground bright finish will become dark after storing for a long time.
- Avoid breathing dusts or powders generated during grinding electrode tips

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

Chemical Name	CAS-No.	TLV Mg/M3
Tungsten	7440-33-7	10mg/m <sup>3</sup>
Thorium Dioxide	1314-20-1	-
Cerium Dioxide	1345-13-7	-
Lanthanum Dioxide	1312-81-8	-
Zirconium Oxide	1314-23-4	10mg/m <sup>3</sup>
Yttrium Oxide	1314-36-9	-

ENGINEERING CONTROLS: n/a

## INDIVIDUAL PROTECTION MEASURES

Exposure Area	Protection Measure
Respiratory	Avoid inhaling fumes/gases; be sure there is enough ventilation and/or fumes extractors are available.
Eye	Use helmets with suitable shielding glass, protective screens or flash goggles
Skin	Cover exposed areas with appropriate clothing
Ear	Use ear protectors and/or ear plugs
Hand	Use protective gloves
Thermal	Wear heat protective clothing

**SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES**

APPEARANCE:	Bright grey metal colour
ODOR:	Odorless
ODOR THRESHOLD:	n/a
pH:	n/a
MELTING POINT/FREEZING POINT:	3400°C
BOILING POINT:	5900°C
FLASH POINT:	n/a
SPECIFIC GRAVITY:	19.3
EVAPORATION RATE:	No
FLAMMABILITY (solid, gas):	No
UPPER/LOWER FLAMMABILITY OR EXPLOSIVE LIMITS:	n/a
VAPOUR PRESSURE:	No
VAPOUR DENSITY:	No
RELATIVE DENSITY:	n/a
SOLUBILITY IN WATER:	Insoluble
PARTITION COEFFICIENT: N-OCTONOL/WATER:	n/a
AUTO-IGNITION TEMPERATURE:	n/a
DECOMPOSITION TEMPERATURE:	n/a

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VISCOSITY: n/a  
SPECIFIC WEIGHT: n/a

### SECTION 10: STABILITY AND REACTIVITY

REACTIVITY: n/a  
STABILITY: Stable  
POSSIBILITY OF HAZARDOUS REACTIONS: n/a  
CONDITIONS TO AVOID: No  
INCOMPATIBLE MATERIALS: No  
HAZARDOUS DECOMPOSITION PRODUCTS: Welding fumes (oxides of metal being welded) and gases (such as carbon monoxide) depending on the process, procedure and metal welded. Some loss of metal from the electrodes does occur.

### SECTION 11: TOXICOLOGICAL INFORMATION

TOXICOLOGICAL INFORMATION:  
The product is not toxic as it is; when in use, refer to Sections 2 and 8.  
Prolonged operation causes chronic effects to eyes, ears and respiratory tract,

### SECTION 12: ECOLOGICAL INFORMATION

ECOLOGICAL INFORMATION:  
Ferrous product; do not dispose of it in the environment (metal scrap). When used in combination with fumes extractors, treat the ensuing powders according to the provisions in force.

### SECTION 13: DISPOSAL CONSIDERATIONS

DISPOSAL METHOD:  
Product; ferrous scrap, disposable as such, raw material suitable for melting.  
Cardboard and/or plastic packing; to be recycled according to the provisions in force.

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**SECTION 14: TRANSPORT INFORMATION**

High-density product, not dangerous according to the transport provisions in force.

UN NUMBER:	n.a
PROPER SHIPPING NAME:	n/a
TRANSPORT HAZARD CLASS:	n/a
PACKING GROUP:	n.a
ENVIRONMENTAL HAZARDS FOR TRANSPORT PURPOSES:	n.a
SPECIAL PRECAUTIONS FOR USER:	n.a
ADDITIONAL INFORMATION:	n.a
HAZCHEM OR EMERGENCY ACTION CODE:	n.a

**SECTION 15: REGULATORY INFORMATION**

MONTREAL PROTOCOL (OZONE DEPLETING SUBSTANCES):	n.a
THE STOCKHOLM CONVENTION (PERSISTENT ORGANIC POLLUTANTS):	n.a
THE ROTTERDAM CONVENTION (PRIOR INFORMED CONSENT):	n.a
BASEL CONVENTION (HAZARDOUS WASTE):	n.a
INTERNATIONAL CONVENTION FOR THE PREVENTION OF POLLUTION FROM SHIPS (MARPOL):	n.a
SAFETY, HEALTH AND ENVIRONMENTAL REGULATIONS:	n.a

**SECTION 16: OTHER INFORMATION****OTHER INFORMATION:**

Dynaweld Industrial Supplies Pty Ltd requires that all customers read this product card carefully so as to be informed about the risks implied in the use of the product, and provide any person involved with a copy of the same and/or adequate training on the use of the product.

This card has been drawn up in consideration of the directions contained in the information cards on welding fumes, published by the International Institute of Welding (IIW) and available in the Italian language at the Italian Institute of Welding, Genos.