

SUPERARC® ORBITAL TIG ER90S-B3

Low Alloy Steel ▪ AWS ER90S-B3

KEY FEATURES

- Ultra-clean surface treatment for porosity free welds
- Trace elements are controlled to ensure low Bruscato (X-Factor <10 ppm) for resistance to temper embrittlement
- Designed for prolonged elevated temperatures up to 600°C (1100°F)
- Designed for welding of 2.25% chromium, 1% molybdenum low alloy steels
- Capable of exceeding AWS minimum requirement of 620 MPa (90 ksi) tensile strength after 8 hours of stress relieving at 690°C (1275°F)
- Precision Layer Wound

WELDING POSITIONS

All

CONFORMANCES

AWS A5.28: ER90S-B3
AWS A5.28M: ER62S-B3
ASME SFA-5.28: ER90S-B3

TYPICAL APPLICATIONS

- Petrochemical
- Power Generation
- Power Plants
- Pressure Vessels
- Process Piping
- Turbine Castings

SHIELDING GAS

100% Argon

DIAMETERS / PACKAGING

Diameters in (mm)	2 lb (1 kg) Plastic Spool 8 lb (3.6 kg) Master Carton	10 lb (4.5 kg) Plastic Spool
0.035 (0.9)	ED034467	ED034471
0.045 (1.1)	ED034468	ED034472

WIRE COMPOSITION - As Required per AWS A5.28/A5.28M

	%C	%Mn	%Si	%Ni	%P	%S
Requirements - AWS ER90S-B3	0.07-0.12	0.40-0.70	0.40-0.70	0.20 max	0.025 max	0.025 max
Typical Results ⁽¹⁾	0.09-0.10	0.53-0.57	0.53-0.57	0.03-0.04	0.004	0.003- 0.004
	%Cr	%Mo	%Cu	%Sb	%Sn	%As
Requirements - AWS ER90S-B3	2.30-2.70	0.90-1.20	0.35 max	N/A	N/A	N/A
Typical Results ⁽¹⁾	2.38-2.42	0.99-1.02	0.06	0.001	0.002-0.003	0.001

⁽¹⁾See test results disclaimer

Material Safety Data Sheets (MSDS) and Certificates of Conformance are available on our website at www.lincolnelectric.com

TEST RESULTS

Test results for mechanical properties, deposit or electrode composition and diffusible hydrogen levels were obtained from a weld produced and tested according to prescribed standards, and should not be assumed to be the expected results in a particular application or weldment. Actual results will vary depending on many factors, including, but not limited to, weld procedure, plate chemistry and temperature, weldment design and fabrication methods. Users are cautioned to confirm by qualification testing, or other appropriate means, the suitability of any welding consumable and procedure before use in the intended application.

CUSTOMER ASSISTANCE POLICY

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