



E9018-B3

Built for heat, engineered for reliability

ENGINEERED FOR ELEVATED TEMPERATURE PERFORMANCE

ISOARC E9018-B3 is a premium low hydrogen, iron powder electrode developed for welding 2.25% chromium – 1.0% molybdenum creep-resistant steels operating under severe elevated-temperature service conditions. The weld metal provides excellent tensile strength, oxidation resistance, creep resistance and long-term metallurgical stability, making it ideal for pressure equipment exposed to prolonged high-temperature operation.

Manufactured under strict quality control using internationally proven formulations, ISOARC E9018-B3 delivers exceptional weld quality with excellent arc stability, smooth metal transfer, easy slag removal and outstanding mechanical properties. It is specifically designed for critical fabrication and maintenance within the petrochemical, refinery, power generation and heavy process industries where weld integrity and long service life are essential.

Features & Benefits	Typical Applications
■ Premium Low Hydrogen coating ■ high deposition efficiency ■ Outstanding high temperature strength ■ Superior creep resistance ■ Excellent resistance to thermal fatigue ■ Smooth, stable arc and easy slag removal ■ Suitable for AC and DCEP ■ Ideal for multi pass welding	■ Steam headers ■ Boilers ■ Chemical processing equipment ■ High pressure Steam piping ■ Heat exchangers ■ Reactor Vessels ■ Superheaters ■ Maintenance shutdowns

Technical Information

Classification	AWS A5.5 E9018-B3
Polarity	AC & DCEP
Welding Positions	Flat ■ Horizontal ■ Vertical Up ■ Overhead
Base Materials	ASTM A335 P22, A387, A182 F22, A217 Wc9, EN10CrMo9-10
Storage	Store dry. After opening vacuum pack store in Holding oven 120–150°C

Mechanical Properties	Typical	Typical Chemical Composition	
Tensile Strength	> 620 MPa	C 0.05 - 0.1	Molybdenum 0.90 - 1.20
Yield Strength	≥ 530 MPa	Mn 0.7 - 1.2	P+ S <0.02
Elongation	≥ 18%	Si 0.3 - 0.7	Cr 2.0 - 2.75

Current Range	
2.5mm	60 - 90A
3.2mm	90 - 130 A
4.0mm	120 - 180A
5.0mm	170 - 230A

Manufactured by Thuthuka Welding Products (Pty) Ltd

Manufactured under an ISO 9001 quality management system using internationally proven formulations to deliver consistent welding performance and dependable quality.