



E8018-C1

Engineered for low temperature performance

ENGINEERED FOR ELEVATED TEMPERATURE PERFORMANCE

ISOARC E8018-C1 is a premium low hydrogen, iron powder electrode developed for welding 2.25% nickel steels and other low alloy steels requiring excellent impact toughness at sub-zero temperatures.

Designed for demanding cryogenic and low-temperature service, the weld deposit provides outstanding toughness, high strength and excellent resistance to hydrogen cracking. ISOARC E8018-C1 produces a smooth, stable arc with excellent slag removal and superior bead appearance, making it suitable for critical fabrication where weld integrity is essential.

ISOARC E8018-C1 is ideally suited for the fabrication and maintenance of refrigerated storage vessels, LNG and LPG installations, ammonia plants and low-temperature process equipment.

Features & Benefits	Typical Applications
■ Premium Low Hydrogen coating ■ Nominal 2.25% Nickel weld deposit ■ Excellent low-temperature toughness ■ Excellent resistance to hydrogen cracking ■ Excellent crack resistance ■ Smooth, stable arc and easy slag removal ■ Suitable for AC and DCEP ■ All-position welding (except vertical down)	■ LNG & LPG storage tanks ■ Refrigerated ammonia tanks ■ Cryogenic piping ■ Ship Building ■ Chemical plants ■ Gas processing facilities ■ Industrial gas storage ■ Low temp maintenance and repair

Technical Information

Classification	AWS A5.5 E8018-C1
Polarity	DCEP & AC
Welding Positions	Flat ■ Horizontal ■ Vertical Up ■ Overhead
Base Materials	ASTM A203, A353, A553 Type 1, 2.25% Nickel steels, Low temp Steels
Storage	Store dry. After opening vacuum pack store in Holding oven 120–150°C

Mechanical Properties	Typical	Typical Chemical Composition	
Tensile Strength	> 520 MPa	C 0.06	Nickel 2 - 2.75
Yield Strength	≥ 460 MPa	Mn 0.95 - 1.1	P+ S <0.02
Elongation	≥ 26%	Si < 0.36 - 0.6	

Current Range	
2.5mm	70 - 110A
3.2mm	90 - 160A
4.0mm	130 - 180A
5.0mm	200 - 260A

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.