

IABCO ERNiCr3

MIG/GMAW, TIG/GTAW and SAW nickel base wire

Product name	IABCO ERNiCr3		
Classification EN ISO	18274:	S Ni6082	
Material No.	UNS:	N06082	
Classification AWS	A5.14:	ERNiCr-3	
Approvals	CE.		
Applications	<p>Nickel base wire, commonly referred to as alloy 82, which is used for an extensive scope of applications over a wide range of service temperatures from -269°C to over 900°C.</p> <p>Uses include welding nearly matching, and other similar, heat-resisting nickel base alloys for applications in furnaces and other high temperature equipment.</p> <p>Other applications include: Dissimilar welds between many nickel base alloys and stainless, low alloy or CrMo steels. Dissimilar joints that will be subject to elevated temperature service; for example CrMo to high carbon stainless steel, in refineries and power generation. Welding of low temperature (3-5% Ni) steels for service down to -100°C, in refineries, petrochemical and LNG. Surfacing of CMn and low alloy steels.</p>		
Base materials	<p>Nickel base alloy 600: N06600, 2.4816, Inconel™ 600 (Special Metals). Dissimilar welds: nickel alloys to low alloy/CrMo/stainless steel. High temperature welds: creep resisting CrMo to stainless steel. Low temperature welds: 3-5% Ni steels. Cladding: surfacing a wide range of steels.</p>		
Typical analysis of wire, weight %	C: 0.03 Mn: 3.00 Ni: Balance Fe: 1.30	Si: 0.10 Cr: 20.0 Nb: 2.40 Ti: 0.40	
Typical heat treatment ⁽¹⁾	Requirements for preheat and PWHT will be dependent on the base material being welded.		
Typical mechanical properties of weld ⁽²⁾	0.2% proof stress Rp0.2%: Tensile strength Rm: Elongation 4d/5d: Impact ISO-V, +20°C: -196°C:	<u>TIG</u> 380MPa 680MPa 40/40% 200J 100J	<u>MIG</u> 360MPa 660MPa 40/40% 150J 75J

Notes (1) Application codes and project specifications should always be referred to for specific requirements.

(2) Actual mechanical properties will be dependent on specific welding procedure (including shielding gas, flux, PWHT etc) and should always be confirmed by approval of an appropriate welding procedure.