

Exaton NiCr-3

NiCr-3 is filler material for joining NiCrFe alloys, 9% Ni steels used at cryogenic temperatures, stainless steels to carbon steels, high service temperature NiCu alloys to carbon steels and NiCu alloys to nickel alloys. NiCr-3 can be used in air up to 1175°C (2145°F) and in sulphur dioxide atmospheres up to 800°C (1470°F). NiCr-3 is suitable for MIG, TIG, PAW and SAW and available as wire and rods. It is used for TIG-welding.

Specifications	
Classifications	SFA/AWS A5.14 : ERNiCr-3 EN ISO 18274 : S Ni 6082 (NiCr20Mn3Nb)
Approvals	VdTÜV : 00515

Alloy Type	Alloyed nickel (Ni + 20 % Cr + 3 % Mn + 2.5 % Nb)
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Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
As Welded	480 MPa (70 ksi)	720 MPa (104 ksi)	40 %
As Welded 350 °C (662 °F)	400 MPa (58 ksi)	620 MPa (90 ksi)	37 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
As Welded	20 °C (68 °F)	230 J (170 ft-lb)
As Welded	-196 °C (-321 °F)	150 J (111 ft-lb)

Typical Wire Composition %									
C	Mn	Si	S	P	Ni	Cr	Mo	Al	Cu
<=0.03	3	0.1	<=0.01	<=0.01	73	20	0.05	0.4	<=0.05

Typical Wire Composition %					
N	Nb	Ti	Co	Fe	Nb+Ta
0.05	2.5	0.4	<=0.1	<=1	2.6

Typical Weld Metal Analysis %									
C	Mn	Si	S	P	Ni	Cr	Mo	Al	Cu
<0.02	3.2	0.01	0.003	<0.003	73	20	0.01	0.09	0.01

Typical Weld Metal Analysis %					
N	Nb	Ti	Co	Fe	Nb+Ta
0.03	2.2	0.32	<0.02	1	2.5