

OK Autrod 312

A continuous solid corrosion resisting chromium-nickel wire for welding of stainless steels of the 29% Cr, 9% Ni types. OK Autrod 312 has a good oxidation resistance at high temperatures due to its high content of Cr. The alloy is widely used for joining dissimilar steels especially if one of the components is fully austenitic and steels that are difficult to weld, i.e. machine components, tools, austenitic manganese steels.

Specifications

Classifications	EN ISO 14343-A : G 29 9 SFA/AWS A5.9 : ER312
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Alloy Type	Ferritic-austenitic (29 % Cr - 9 % Ni)
Shielding Gas	M12, M13 (EN ISO 14175)

Tensile Properties

Testing Condition	Yield Strength	Tensile Strength	Elongation
As Welded	610 MPa	770 MPa	20 %

Charpy Testing

Testing Condition	Testing Temp	Impact Value
As Welded	20 °C	50 J

Typical Wire Composition %

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
0.10	1.7	0.41	0.001	0.020	8.8	30.4	0.15	0.11	0.05

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr
0.1	1.7	0.5	0.010	0.020	9	29

Deposition Data

Diameter	Amps	Volts	Wire Feed Speed	Deposition Rate
1.0 mm	80-190 A	16-24 V	2.9-8.4 m/min	1.1-3.1 kg/h
1.2 mm	180-280 A	20-28 V	4.9-8.5 m/min	2.6-4.5 kg/h