

## OK Autrod 13.23

A copper coated, Ni-alloyed (0,9% Ni), solid wire for GMAW of low-temperature fine-grained steels. The wire provides good impact toughness down to -50 C and is especially suitable for use in the offshore industry.

Specifications	
<b>Classifications</b>	EN ISO 14341-A : G50 4 M21 Z3Ni SFA/AWS A5.28 : ER80S-Ni1 EN ISO 14341-B : G55A 5 M21 SN2 EN ISO 14341-B : G55P 5U M21 SN2
<b>Approvals</b>	BV : SA4Y40M NAKS/HAKC : 0.8-1.2 mm

<b>Alloy Type</b>	Low alloyed (1 % Ni)
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Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
<b>EN ISO 80Ar/20CO2</b>			
As Welded	550 MPa	640 MPa	25 %
Stress Relieved 1 hour(s) 620 °C	500 MPa	600 MPa	27 %
<b>AWS 80Ar/20CO2</b>			
As Welded	480 MPa	560 MPa	30 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
<b>EN ISO 80Ar/20CO2</b>		
Stress Relieved 1 hour(s) 620 °C	-50 °C	80 J
As Welded	-40 °C	60 J
<b>AWS 80Ar/20CO2</b>		
As Welded	-46 °C	70 J
As Welded	0 °C	130 J
As Welded	20 °C	150 J
As Welded	-60 °C	20 J

Typical Weld Metal Analysis %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
<b>Ar-80%, CO2-20% (M21)</b>									
0.09	1.00	0.60	0.010	0.010	0.90	0.10	0.20	0.01	0.10

Typical Wire Composition %									
C	Mn	Si	S	P	Ni	Cr	Mo	V	Cu
0.07	1.11	0.57	0.010	0.010	0.9	0.07	0.29	0.01	0.15

Deposition Data				
Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
0.8 mm	40-170 A	16-22 V	2.0-10.8 m/min	0.4-2.6 kg/h
1.0 mm	80-280 A	18-28 V	2.7-14.7 m/min	1.0-5.4 kg/h
1.2 mm	120-350 A	20-33 V	2.7-12.4 m/min	1.5-6.6 kg/h



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### Recommended Welding Parameters

	Current	Voltage
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