Purus 46 CF

A non copper coated G4Si1/ER70S-6 solid wire for GMAW of carbon-manganese steels. Purus 46 CF is particularly suited to be used in general construction, automotive components and mobile machinery industries. It has a slightly higher manganese and silicon content than Purus 42 CF to increase the weld metal strength.The wire may be welded with either a gas mixture or with pure CO2 as shielding gas. Purus 46 CF is designed to give a clean weld bead with a minimum of silica islands, low fumes and extremely low spatter levels. The wire is suitable for robotic applications at high deposition rates.

Classifications	EN ISO 14341-A : G 42 3 C1 4Si1 EN ISO 14341-A : G 46 4 M20 4Si1 EN ISO 14341-A : G 46 4 M21 4Si1 EN ISO 14341-A : G 4Si1 SFA/AWS A5.18 : ER70S-6
Approvals	CE : EN 13479 DB : 42.039.42 VdTÜV : 19262

Alloy Type	Carbon-manganese steel (Mn/Si-alloyed)

Typical Tensile Properties			
Condition	**Yield Strength**	**Tensile Strength**	**Elongation**
EN 80Ar/20CO2 (M21)			
As Welded	475 MPa	585 MPa	26 %
EN CO2 (C1)			
As Welded	450 MPa	560 MPa	26 %
EN 92Ar/8CO2 (M20)			
As Welded	500 MPa	600 MPa	25 %
AWS CO2 (C1)			
As Welded	450 MPa	560 MPa	29 %

Typical Charpy V-Notch Properties		
Condition	**Testing Temperature**	**Impact Value**
EN 80Ar/20CO2 (M21)		
As Welded	20 °C	130 J
As Welded	-30 °C	70 J
As Welded	-40 °C	60 J
EN CO2 (C1)		
As Welded	-30 °C	70 J
As Welded	20 °C	120 J
EN 92Ar/8CO2 (M20)		
As Welded	-30 °C	90 J
As Welded	-40 °C	80 J
AWS CO2 (C1)		
As Welded	-30 °C	70 J

Typical Wire Composition %		
C	**Mn**	**Si**
0.08	1.65	0.90

Deposition Data				
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Deposition Rate**
0.8 mm	60-200 A	18-24 V	3.2-10.0 m/min	0.8-2.3 kg/h
0.9 mm	70-250 A	18-26 V	3.0-12.0 m/min	0.9-3.5 kg/h

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Deposition Data				
Diameter	**Current**	**Voltage**	**Wire Feed Speed**	**Deposition Rate**
1.0 mm	80-300 A	18-32 V	2.7-15.0 m/min	1.0-5.5 kg/h
1.14 mm	100-350 A	18-34 V	2.6-15.0 m/min	1.2-7.0 kg/h
1.2 mm	120-380 A	18-35 V	2.5-15.0 m/min	1.3-8.0 kg/h
1.32 mm	130-400 A	19-35 V	2.4-15.0 m/min	1.5-8.5 kg/h
1.6 mm	225-550 A	28-38 V	2.3-10.0 m/min	2.1-9.4 kg/h