

Purus 42 CF

A non copper coated, G3Si1/ER70S-6 solid wire for GMAW of carbon-manganese steels. Purus 42 CF is particularly suited to be used in general construction, automotive components and mobile machinery industries. The wire may be welded with either a gas mixture or with pure CO₂ as the shielding gas. Purus 42 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 Weld Metal:	EN ISO 14341-A: G 38 3 C1 3Si1, EN ISO 14341-A: G 42 4 M21 3Si1, EN ISO 14341-A: G 42 4 M20 3Si1
Classifications Wire Electrode:	EN ISO 14341-A: G 3Si1, SFA/AWS A5.18: ER70S-6
Approvals:	CE EN 13479, CWB B-G 49A 3 C1 S6 (B-G 49A 3 C G6), VdTÜV 19260

Approvals are based on factory location. Please contact ESAB for more information.

Alloy Type:	Carbon-manganese steel (Mn/Si-alloyed)
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Typical Tensile Properties			
Condition	Yield Strength	Tensile Strength	Elongation
AWS CO₂			
As welded	420 MPa	530 MPa	30 %
EN 80Ar 20CO₂			
As welded	470 MPa	560 MPa	25 %
EN 92Ar 8CO₂			
As welded	475 MPa	570 MPa	26 %
EN CO₂			
As welded	430 MPa	530 MPa	24 %

Typical Charpy V-Notch Properties		
Condition	Testing Temperature	Impact Value
AWS CO₂		
As welded	-30 °C	80 J
EN 80Ar 20CO₂		
As welded	20 °C	130 J
As welded	-30 °C	90 J
As welded	-40 °C	80 J
EN 92Ar 8CO₂		
As welded	20 °C	150 J
As welded	-30 °C	100 J
As welded	-40 °C	75 J

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Typical Charpy V-Notch Properties

Condition	Testing Temperature	Impact Value
EN CO2		
As welded	20 °C	110 J
As welded	-30 °C	75 J
As welded	-40 °C	65 J

Typical Wire Composition %

C	Mn	Si
0.08	1.45	0.85

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
1.0 mm	80-300 A	18-32 V	2.7-15 m/min	1.0-5.5 kg/h
1.2 mm	120-380 A	18-35 V	2.5-15 m/min	1.3-8.0 kg/h