



DATA SHEET
DS 050
Rev. 6 dd 12/05/2015
INEFIL CU

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CLASSIFICATION

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.28: ER80S-G	EN ISO 14341-A: G 50 4 M21 Z
AWS A 5.28M: ER55S-G	(EN ISO 16834-A: G Mn3Ni1Cu)
ASME SFA 5.28: ER80S-G	
ASME SFA 5.28M: ER55S-G	

APPROVALS

TÜV	DB	

ALLOY TYPE

Copper-coated solid wire for welding weather-resistant steels.

APPLICATIONS

Low-alloy copper-coated solid wire with Ni-Cu-Cr additions designed for weather-resistant steel. Thanks to the chemical composition and weld metal mechanical properties it is also used for welding high tensile strength steels. Suitable for the construction of containers, tanks, bridges, building panels, chimneys, means of transport, offshore platforms, etc. The weld material shows a good resistance to atmospheric corrosion and salt water. To be used under the shield of Ar+CO₂.

MATERIALS TO BE WELDED

ASTM		EN		Others
A 242 1, 2		10155 S235 J 0 W	(BS 4360 Gr WR50A)	Corten A
A 588 Gr A		10155 S235 J 2 W	(BS 4360 Gr WR50B)	Corten B1
A 588 Gr B		10155 S355 J 0 W	(BS 4360 Gr WR50C)	Italcor 1-2
A 588 Gr C		10155 S355 J 2 W	steel of EN 10025-5	Resco
A 588 Gr K		10155 S355 K 2 G 1 W		Patinax
				Resista

WELDING GUIDELINES

Interpass temperature 150°C. Preheat and PWHT are not required.

TECHNICAL INFORMATION

Gas: Mix Ar- CO₂ (EN 14175)
Welding position: all positions



WELDING PARAMETERS

Current	DC + Reverse polarity				
	0.8	1.0	1.2	1.6	
Diameter (mm)					
Volts (V)	16 ÷ 28	17 ÷ 32	18 ÷ 34	19 ÷ 38	
Intensity (A)	60 ÷ 200	80 ÷ 260	100 ÷ 360	130 ÷ 450	



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TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	S %	P %	Cr %	Ni %	Mo %	Cu %	
0.08	1.40	0.75	0.01	0.01	0.30	0.70	-	0.40	

TYPICAL MECHANICAL PROPERTIES

GAS		Yield strength	Tensile strength	Elongation on % 5d	Impact energy (Charpy V)				
		Rs	Rm	A 5d	+ 20°C	0°C	-20°C	-40°C	-50°C
		(MPa)	(MPa)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
M21	as welded	530	620	26	130	110	90	70	50

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire			
TIG Rods	INETIG CU	AWS A 5.28: ER80S-G	(EN 16834-A: W Mn3Ni1Cu)
SAW Submerged arc	INESUB S2CU	AWS A 5.23: EG	EN 14171-A: S0
FCAW Cored wire	INETUB M71TG-CU	AWS A 5.28: E80C-W2	
SMAW Electrodes	INE 57 B CNC	AWS A 5.5: E8018-W2	EN 2560-A: E 50 4 Z B