



DATA SHEET
DS 070
Rev. 6 dd 05/05/2015
INEFIL 80 Ni 2

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CLASSIFICATION

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.28: ER80S-Ni2	EN ISO 14341-A: G 50 6 M21 2Ni2
AWS A 5.28M: ER55S-Ni2	
ASME SFA 5.28: ER80S-Ni2	
ASME SFA 5.28M: ER55S-Ni2	

APPROVALS

ALLOY TYPE

2.5Ni for good low temperature toughness.

APPLICATIONS

Low alloy copper-coated solid wire designed for welding low alloy steels with 2% Ni content, fine grained for low temperature applications. Suitable for the construction of offshore platforms, tanks and pipelines, where good fracture toughness from as-welded joints is demanded down to temperatures in the region of -60°C. To be used under the shield of Ar+CO₂.

MATERIALS TO BE WELDED

ASTM		EN		Others
A 203 Gr A, B	API 5 LX65	10025 S355	10113-3 S420	
A 333 Gr 6		10208-2 L360	10028-4 11MnNi 5-3	
A 350 Gr LF1, LF2		10208-2 L415	10028-4 13MnNi 6-3	
A 352 Gr LC2		10208-2 L455	10028-4 15NiMn 6	
API 5LX52		10113-2 S355	10222-3 13MnNi 6-3	
API 5LX56		10113-2 S420	10222-3 15NiMn 6	
API 5LX60		10113-3 S355		

WELDING GUIDELINES

Preheat and interpass temperature 150°C. PWHT at 620°C for an hour.

TECHNICAL INFORMATION

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

**WELDING PARAMETERS**

Current	DC + Reverse polarity				
Diameter (mm)	0.8	1.0	1.2	1.6	
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 %	
0.10	1.00	0.55	0.01	0.01	-	2.30	-	0.12	

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	-60°C
		(MPa)	(Mpa)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
M21	as welded	510	570	23	-	-	-	70	50
M21	after PWHT	480	560	26	-	-	-	90	70

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire			
TIG Rods	INETIG 80 Ni 2	AWS A 5.28: ER80S-Ni2	EN 636-A: W2Ni2
SAW Submerged arc	INESUB S2Ni2	AWS A 5.23: ENi2	EN 14171-A: S2Ni2
FCAW Cored wire	INETUB R81T1-Ni2 INETUB M81TG-Ni2 INETUB B81T5-Ni2	AWS A 5.29: E81T1-Ni2 AWS A 5.28: E80C-Ni2 AWS A 5.29: E81T5-Ni2	EN 17632-A: T 2Ni EN 17632-A: T 2Ni EN 17632-A: T 2Ni
SMAW Electrodes	INE C1	AWS A 5.5: E8018-C1	EN 2560-A: 2Ni