



**DATA SHEET**  
**DS 075**  
**Rev. 1 dd 14/01/2013**  
**INEFIL 80 Ni 3**

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**CLASSIFICATION****APPROVALS**

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.28: ER80S-Ni3	EN ISO 14341-B: G 57P 7 M22 SN71
AWS A 5.28M: ER55S-Ni3	
ASME SFA 5.28: ER80S-Ni3	
ASME SFA 5.28M: ER55S-Ni3	


**ALLOY TYPE**

3.5Ni for good low temperature toughness.

**APPLICATIONS**

Low alloy copper-coated solid wire designed for welding low alloy steels with 3,5% Ni content, fine grained for low temperature applications. It is used in petrochemical industry where it finds applications in construction of cryogenic plant and associated pipework, in the manufacture, storage and distribution of volatile liquids and liquefied gases, when operating at temperatures to -80°C. To be used under the shield of Ar+O<sub>2</sub>.

**MATERIALS TO BE WELDED**

ASTM		EN		Others
A 203 Gr D, E, F		(BS 1501 Gr 503)		
A 333 Gr 3		(BS 1503 Gr 503)		
A 350 Gr LF3		(BS 1504 Gr 503 LT60)		
A 352 Gr LC3				

**WELDING GUIDELINES**

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

**TECHNICAL INFORMATION**

Gas: Mix Ar- O<sub>2</sub> (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 %	
0.10	1.00	0.60	0.010	0.010	-	3.50	-	0.12	

**TYPICAL MECHANICAL PROPERTIES**

GAS		Yield strength	Tensile strength	Elongation on % 5d	Impact energy (Charpy V)				
		Rs	Rm	A 5d	0°C	-20°C	-50°C	-60°C	-75°C
		(MPa)	(Mpa)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
M22	after PWHT	550	630	25	-	-	60	50	35

**PRODUCTS AVAILABLE**

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire			
TIG Rods	INETIG 80 Ni 3	AWS A 5.28: ER80S-Ni3	EN 636-B: WN71
SAW Submerged arc	INESUB S2Ni3	AWS A 5.23: ENi3	EN 14171-A: S2Ni3
FCAW Cored wire			
SMAW Electrodes			