



DATA SHEET
DS 053
Rev. 04 dd 10/03/09
INEFIL NIMOCR

I.N.E. S.p.A.
Via Facca 10
35013 Cittadella (PADOVA)
ITALY
Tel. : +39 049/9481111 Fax: + 39 049/9400249
Internet: www.ine.it E mail: ine@ine.it

CLASSIFICATION

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.28: ER100S-G	EN ISO 16834-A: G 69 4 M Mn3Ni1CrMo

APPROVALS

TÜV	DB	

ALLOY TYPE

Copper-coated solid wire for welding high strength steels.

APPLICATIONS

Low-alloy copper-coated solid wire with Ni-Cr-Mo additions designed for welding high yield strength steels with minimum tensile strength higher than 770 MPa. Excellent impact strength at low temperatures (up to -50°C). Suitable for the metal working industry, offshore fabrication, chemical and petrochemical industry. It also has applications in fabrications of HSLA (high-strength low-alloy) steels, which may be used for industrial machinery construction, cranes and other highly stressed structural components. To be used under the shield of Ar+CO₂.

MATERIALS TO BE WELDED

ASTM		EN		Others
A 514	API 5LX X65	10137-2 S460	10208-2 L480	RQT 601
A 517	API 5LX X70	10137-2 S500	10208-2 L550	Navy Q1
HY80	API 5LX X80	10137-2 S550	(BS 4360 Gr 55F)	NAXTRA 70
HY90	API 5A L80	10137-2 S620		WELDOX 700
HY100		10137-2 S690		

WELDING GUIDELINES

Preheat and interpass temperature 150°C. PWHT is not required. To obtain the best mechanical properties results, the use with low heat input is advised (follow the steel producer recommendations).

TECHNICAL INFORMATION

Gas: Mix Ar- CO₂ (EN 14175)
Welding positions: 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 %	V %
0.08	1.60	0.50	0.007	0.007	0.30	1.50	0.25	0.12	0.09

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)
MIX	as welded	750	820	19	120	100	90	60	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL 100	AWS A 5.28: ER100S-1	EN 16834-A: G Mn3Ni1,5Mo
	INEFIL 110	AWS A 5.28: ER110S-1	(EN 16834-A: G Mn3Ni2,5CrMo)
	INEFIL 70	AWS A 5.28: ER100S-G	EN 16834-A: G Mn3NiCrMo
	INEFIL NIMO	AWS A 5.28: ER100S-G	EN 16834-A: G Mn3Ni1Mo
TIG Rods	INETIG 100	AWS A 5.28: ER100S-1	EN 16834-A: W Mn3Ni1,5Mo
	INETIG 110	AWS A 5.28: ER110S-1	(EN 16834-A: W Mn3Ni2,5CrMo)
SAW Submerged arc	INESUB S3NIMO	AWS A 5.23: EG	EN 26304-A: S3Ni1Mo
	INESUB EF3	AWS A 5.23: EF3	EN 26304-B: SUN2M33
FCAW Cored wire	INETUB M111TG-K3	AWS A 5.28: E110C-K3	EN 18276-A: T 55 5 Z M M 2 H5
	INETUB M91TG	AWS A 5.28: E90C-G	
	INETUB M121TG-K4	AWS A 5.28: E120C-K4	
	INETUB B121T5-K4	AWS A 5.29: E121T5-K4	
SMAW Electrodes	INE 80 B	AWS A 5.5: E10018M	EN 757: E 1NiMo