



DATA SHEET
DS 361
Rev. 1 dd 14/01/2013
INEFIL INOX 310

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

APPROVALS

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.9: ER310	EN ISO 14343-A: G 25 20
AWS A 5.9M: ER310	
ASME SFA 5.9: ER310	
ASME SFA 5.9M: ER310	

ALLOY TYPE

Solid wire for austenite-ferrite steels.

APPLICATIONS

Inox solid wire designed welding austenitic steels and heat-resistant steels up to 1150°C. Intended for welding steels with similar chemical composition and cast iron with 25% Cr and 20% Ni content. Suitable for vessels (designed for high temperature service up to 1200°C), heaters, petrochemical and ceramic industry and wherever the high resistance at elevated temperatures is required. This solid wire is also used for welding dissimilar steels and their heterogeneous joint, including those with PWHT, and for buffer layers. To be used under the shield of Ar 98% + O₂ 2%.

MATERIALS TO BE WELDED

ASTM		EN	Others
310	A 297 HF	10088-1/-2 X10CrAl 24	
310 S	A 297 HJ	10088-1/-2 X15CrNiSi 20-12	
A 240 CK20		10088-1/-2 X15CrNiSi 25-20	
A 240 HK40		10088-1/-2 X12CrNi 25-21	
AISI 305		10213-4 GX25CrNiSi 18-9	
AISI 314		10213-4 GX40CrNiSi 20-14	
		10213-4 GX40CrNiSi 22-9	

WELDING GUIDELINES

Preheat and PWHT are not required. Maximum interpass temperature 150°C.

TECHNICAL INFORMATION

Gas: Mix Ar- O₂ (EN ISO 14175)
 Welding positions: all positions



WELDING PARAMETERS

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



DATA SHEET
DS 361
Rev. 1 dd 14/01/2013
INEFIL INOX 310

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

TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	Cr %	Ni %	Mo %	Cu %			
0.10	1.80	0.40	26.00	21.00	0.20	0.15			

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)
M13	as welded	355	610	35	-	-	-	-	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire			
TIG Rods	INETIG INOX 310	AWS A 5.9: ER310	EN 14343-A: W 25 20
SAW Submerged arc			
FCAW Cored wire			
SMAW Electrodes	INOX 310 R	AWS A 5.4: E310-16	EN ISO 3581-A: E 25 20 R