



DATA SHEET
DS 354
Rev. 6 dd 23/07/2014
INEFIL INOX 316 LSI

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CLASSIFICATION

AWS SPECIFICATIONS	EN SPECIFICATIONS
AWS A 5.9: ER316LSi	EN ISO 14343-A: G 19 12 3 L Si
AWS A 5.9M: ER316LSi	
ASME SFA 5.9: ER316LSi	
ASME SFA 5.9M: ER316LSi	

APPROVALS

TÜV	DB	

ALLOY TYPE

316L for welding stainless steel.

APPLICATIONS

Solid wire with low carbon concentration designed for welding stainless steel with 19% Cr, 12% Ni and 2-3% Mo content with service temperature up to 400°C. Thanks to the higher silicon content its arc stability gets improved, it gives good-looking weld bead and very limited spattering. It finds application in pipes fabrication, weld overlay, vessels & boilers fabrication, ship building and marine or salt environment. Generally good resistance to corrosion, intercrystalline corrosion and to many acids. To be used under the shield of Ar 98% + O₂ 2%.

MATERIALS TO BE WELDED

ASTM		EN	Others
316	316 Ti	10088-1/-2 X2CrNiMo 17-12-2	
316 L	316 Cb	10088-1/-2 X2CrNiMo 18-14-3	
316 LN		10088-1/-2 X2CrNiMoN 17-11-2	
CF3 M		10088-1/-2 X2CrNiMoN 17-13-3	
CF8 M		10088-1/-2 X4CrNiMo 17-12-2	
		10088-1/-2 X4CrNiMo 17-13-3	
		10213-4 GX5CrNiMo 19-11	

WELDING GUIDELINES

Preheat and PWHT are not required. Maximum interpass temperature 250°C.

TECHNICAL INFORMATION

Gas: Mix Ar- O₂ (EN ISO 14175)

Welding positions: all positions



WELDING PARAMETERS

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



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TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	Cr %	Ni %	Mo %	Cu %			
0.020	1.70	0.80	18.50	12.20	2.50	0.10			

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	440	560	40	> 47	-	-	-	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire			
TIG Rods	INETIG INOX 316 LSI	AWS A 5.9: ER316LSi	EN 14343-A: W 19 12 3 L Si
SAW Submerged arc			
FCAW Cored wire			
SMAW Electrodes	INOX 316 RLC	AWS A 5.4: E316L-17	EN ISO 3581-A: E 19 12 3 L R