



DATA SHEET
DS 135
Rev. 1 dd 18/05/2015
INETIG INOX 309 LSI

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 5.9: ER309LSi	EN ISO 14343-A: W 23 12 L Si
AWS A 5.9M: ER309LSi	
ASME SFA 5.9: ER309LSi	
ASME SFA 5.9M: ER309LSi	

APPROVALS

ALLOY TYPE

309L for welding austenitic stainless steel.

APPLICATIONS

Tig rod with low carbon concentration designed for welding stainless steel with 23% Cr and 13% Ni content with service temperature in the range of -80°C and 300°C. Thanks to the higher silicon content its arc stability gets improved, it gives good-looking weld bead and very limited spattering. Suitable for heterogeneous welding, generally between dissimilar steels, stainless and carbon-manganese steels. It is used for joints and cushion layers for stainless filler metal.

MATERIALS TO BE WELDED

ASTM		EN	Others
309	309 S	10088-1/-2 X2CrNiN 18-10	
309 L	TP 309	10088-1/-2 X2CrNi 19-11	
304 LN	TP 309 S	10088-1/-2 X5CrNi 18-10	
304 L		10213-4 GX40CrNiSi 22-9	
CF3		10213-4 GX25CrNiSi 18-9	
304		10213-4 GX25CrNiSi 20-4	
		10088-1/-2 X15CrNiSi 20-12	

WELDING GUIDELINES

Preheat and interpass temperature depend on base metal hardenability. PWHT is not required.

TECHNICAL INFORMATION

Gas: Argon 100% (EN ISO 14175)
 Welding positions: all positions



WELDING PARAMETERS

Current	DC - Straight polarity
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PACKAGING DATA

Diameter (mm)	1.2	1.6	2.0	2.4	3.2	4.0
Length (mm)	1000	1000	1000	1000	1000	1000
Carton	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg	5/25 Kg

* tolerances according to EN ISO 544 specification

All information in this data sheet is subject to change without notice.



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TYPICAL CHEMICAL COMPOSITION OF WIRE

C %	Mn %	Si %	Cr %	Ni %	Mo %	Cu %			
0.025	1.80	0.70	20.00	10.00	0.10	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	-60°C
		(MPa)	(MPa)	%	(Joule)	(Joule)	(Joule)	(Joule)	(Joule)
I1	as welded	420	620	42	> 47	-	-	-	-

PRODUCTS AVAILABLE

Process	Product	Classification AWS	Classification EN
MIG/MAG Solid wire	INEFIL INOX 309 LSI	AWS A 5.9: ER309LSi	EN 14343-A: G 23 12 L Si
TIG Rods			
SAW Submerged arc			
FCAW Cored wire			
SMAW Electrodes	INOX 309 RLC	AWS A 5.4: E309L-17	EN ISO 3581-A: E 23 12 L R