

## DATASHEET RW 316 LSI – TIG rods

### Description and Applications

Austenitic stainless steel welding wire suitable to weld base metals of similar compositions like AISI 316 and AISI 316L. Equivalent to RW 316 LAWS except for the higher Si content. This improves the arc stability, the base metal fluidity and the melt run appearance. If the dilution by the base metal produces a low ferrite or fully austenitic weld, the crack sensitivity of the weld is somewhat higher than that of a lower Si content weld metal. Guarantees a better corrosion resistance than RW 308 LSI.

### Rodacciai denomination and approximate equivalent with other standards

	<b>RW 316 LSi</b>
EN ISO 14343-A:2009	W 19 12 3 LSi
EN ISO 14343-B:2009	SS 316 LSi
AWS A5.9-2012	ER 316 LSi

### Approvals

TÜV  
DB  
CE  
CWB

### Filler metal properties

Chemical composition (nominal) in %

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Co	N	Nb	B
min		1,50	0,65	0,005		18,00	11,00	2,50					
max	0,030	2,00	1,00	0,015	0,030	20,00	14,00	3,00	0,30	0,30	0,060	0,050	0,003

### Metal properties

The following data are typical for non-heat treated weld metal from TIG welding with I1 DIN EN ISO 14175 as shielding gas.

### Expected minimum mechanical properties of all weld metal

Temperature	°C	20	-110	-196
Yield strength, Rp 0,2	N/mm <sup>2</sup>	450		
Yield strength, Rp 1,0	N/mm <sup>2</sup>	505		
Tensile strength, Rm	N/mm <sup>2</sup>	620		
Elongation, A5	%	35		
Reduction of area Z	%	64		
Impact energy, ISO – V	J	222	159	50

### Welding parameters

Wire diameter	3,2 mm
Current	180 – 190 A
Voltage	ca. 16 V
Gas	13 l/min
Type of current and polarity	Direct current, electrode positive
Intermediate temperature	max. 180 °C
Welding positions	downhand, horizontal/vertical, vertical upward, overhead
Wall thickness	max. 30 mm
Base metals	X2 CrNiMo 17 12 2 - X5 CrNiMo 17 12 2 - X2 CrNiMo 17 12 3 X6 CrNiMoTi 17 12 2 - X3 CrNiMo 17 13 3 - X6 CrNiMoNb 17 12 2
Highest operating temperature, in the short term range, as for base metal, but not higher than	350 °C
Lowest operating temperature, as for base metal, but not lower than	- 196°C
Resistance to intergranular corrosion proven in accordance with	DIN 50914

### Sizes and marking

Standard sizes : diam. 1,00 – 1,20 – 1,60 – 2,00 – 2,40 – 3,20 and 4,00 mm  
Tolerances on diameter : + 0,01 / - 0,04 mm  
Marking : Each rod is stamped one end with ER 316LSI and RW 1.4430

### Packaging forms

White carton boxes of 5 kg.  
Red, white or blue coloured cardboard tubes of 5 kg.  
Wooden crates of 250 kg.