

## DATASHEET RW 312 – TIG rods

### Description and Applications

Stainless steel welding wire suitable for welding dissimilar parent metals such as carbon steel to stainless steel, particularly those grades with high Ni content. RW 312 gives a two phase weld deposit with high percentages of ferrite in an austenite matrix. Even with considerable dilution by austenite forming elements, such as Ni, the microstructure remains two phase and thus highly resistant to hot cracking. Not recommended for applications operating above 300 °C or for welds to be post weld heat treated.

### Rodacciai denomination and approximate equivalent with other standards

#### RW 312

EN ISO 14343-A:2009 W 29 9  
 EN ISO 14343-B:2009 SS 312  
 AWS A5.9-2012 ER 312

### Filler metal properties

Chemical composition (nominal) in %

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Co	N	Nb	B
min	0,090	1,50	0,30			29,50	8,50						
max	0,120	2,00	0,50	0,015	0,020	31,00	10,00	0,25	0,20	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 shielded gas.

### Expected minimum mechanical properties of all weld metal

Temperature	°C	20
Yield strength, Rp 0,2	N/mm <sup>2</sup>	450
Tensile strength, Rm	N/mm <sup>2</sup>	650
Elongation, A5	%	15
Impact energy, ISO – V	J	40

### 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 312 and RW 1.4337

### Packaging forms

White carton boxes of 5 kg.

Red, white or blue coloured cardboard tubes of 5 kg.

Wooden crates of 250 kg.