

## DATASHEET RW 316 LAWS – MIG wire

### Description and Applications

Austenitic stainless steel welding wire suitable to weld base metals of similar compositions like AISI 316 and AISI 316L. Low C content reduces the possibility of intergranular carbide precipitation and therefore increases the resistance to intergranular corrosion. It is also suitable for welding steel that are stabilized with titanium or niobium. Guarantees a better corrosion resistance than RW 308 LAWS.

### Rodacciai denomination and approximate equivalent with other standards

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

**Approvals**  
CWB

### Filler metal properties

Chemical composition (nominal) in %

	C	Mn	Si	S	P	Cr	Ni	Mo	Cu	Co	Al	Ti	N	Ca	Nb	B	Ce
min		1,50	0,30			18,00	12,00	2,50									
max	0,020	2,00	0,60	0,015	0,025	19,20	13,00	3,00	0,30	0,20			0,060		0,050	0,002	

### Metal properties

The following data are typical for non-heat treated weld metal from MIG welding with M1 DIN EN ISO 14175 as shielded 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>	490		
Tensile strength, Rm	N/mm <sup>2</sup>	630		
Elongation, A5	%	32		
Reduction of area Z	%	46		
Impact energy, ISO – V	J	152	110	53

### Welding parameters

Wire diameter	1,2 mm
Current	250 – 280 A
Voltage	28 V
Gas	14 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
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	

### Recommended welding parameters

Wire diameter (mm)	Wire feed (m/min)	Current (A)	Voltage (V)	Gas (l/min)
<b>Short-arc welding</b>				
0.8	4-8	40-120	15-19	12
1.0	4-8	60-140	15-21	12
<b>Spray-arc welding</b>				
1.0	6-12	140-220	23-28	18
1.2	5-9	180-260	24-29	18
1.6	3-5	230-350	24-30	18

### Packaging forms

Blue metallic wire baskets BS300 of 15 kg.  
 Plastic spools D300 of 12,5 kg for diam. 0,60 – 0,80 mm and of 15 kg for the other diameters. Plastic spools D200 of 5 kg.  
 Drum packaging of about 150 kg for diameter 0,80 mm and of about 250 kg for the other diameters.  
 Diameters : 0,60 – 0,80 – 0,90 – 1,00 – 1,20 – 1,60 mm.