

# ROWAC 316L Si

Solid wire, high-alloyed, stainless



Classifications						
EN ISO 14343-A	EN ISO 14343-B	AWS A5.9	(Mat. No.)			
G 19 12 3 L Si	SS316LSi	ER316LSi	(1.4430)			
Characteristics and typical fields of application						
Austenitic stainless steel wire electrode, resistant to inter-crystalline corrosion, wet corrosion resistant up to 400 °C (752 °F). Heat resistant and nonscaling up to 800 °C (1472 °F).						
Corrosion-resistance similar to matching low-carbon and stabilized austenitic 17/12/2-CrNiMo steels / cast steel grades.						
For joining and surfacing application with matching and similar – non-stabilized – austenitic CrNi(N) and CrNiMo(N) steels and cast steel grades.						
Low temperature service down to –196 °C (-320 °F).						
Base materials						
TÜV-certified parent metal						
1.4401 – X5CrNiMo17-12-2; 1.4404 – X2CrNiMo17-12-2; 1.4435 – X2CrNiMo18-14-3;						
1.4436 – X3CrNiMo17-13-3; 1.4571 – X6CrNiMoTi17-12-2; 1.4580 – X6CrNiMoNb17-12-2;						
1.4583 – X10CrNiMoNb18-12; 1.4409 – GX2CrNiMo19-11-2;						
UNS S31603, S31653; AISI 316L, 316Ti, 316Cb						
Typical analysis of solid wire (wt.-%)						
C	Mn	Si	Cr	Mo	Ni	
0.02	1.7	0.8	18.8	2.8	12.5	
Structure: Austenite with part ferrite						
Mechanical properties of all-weld metal						
Heat-treatment	Yield strength	Yield strength	Tensile strength	Elongation	Impact work	
	R <sub>p0.2</sub>	R <sub>p1.0</sub>	R <sub>m</sub>	A (L <sub>0</sub> =5d <sub>0</sub> )	ISO-V CVN J	
	MPa	MPa	MPa	%	20°C	-196°C
aw	380	420 (≥ 320)	560 (≥ 510)	35 (≥ 25)	70	≥ 32
Operating data						
	Ø (mm)		Polarity: DC (+)	Shielding gas: (EN ISO 14175) M13, M12	Spool:	
	0.8				BS300	
	1.0				B300	
		1.2			Drum	
Welding instruction						
Materials			Preheating	Postweld heat treatment		
Matching and similar non-stabilized and stabilized steels / cast steel grades			None	Mostly none. If necessary, solution annealing at 1050°C (1922°F) – pay attention to tendency to embrittlement		
Approvals						
TÜV (00489) • DB (43.132.10) • DNV-GL • CE						