

Solid wire, high-alloyed, stainless

Classifications						
EN ISO 14343-A	EN ISO 14343-B		AWS A5.9	Mat. No.		
G 19 9 L Si	SS308LSi		ER308LSi	1.4316		
Characteristics and typical fields of application						
<p>Stainless; resistant to inter-crystalline corrosion. Corrosion-resistant similar to matching low-carbon and stabilized austenitic 18/8-CrNi(N) steels / cast steel grades. Cold toughness at subzero temperatures as low as -196 °C (-321 °F). For joining and surfacing applications with matching and similar – stabilized and non-stabilized – austenitic CrNi(N) and CrNiMo(N) steels / cast steel grades. For joining and surfacing work on cryogenic matching/similar austenitic CrNi(N)-steels / cast steel grades. Wet corrosion application temperature max. 350 °C (662 °F). Heatresistant up to 800 °C (1472 °F).</p>						
Base materials						
TÜV-certified parent metal 1.4301 – X5CrNi18-10; 1.4306 – X2CrNi19-11; 1.4311 – X2CrNi18-10; 1.4312 – GX10CrNi18-8; 1.4541 – X6CrNiTi18-10; 1.4546 – X5CrNiNb18-10; 1.4550 – X6CrNiNb18-10; AISI 304, 304L, 304LN, 302, 321, 347; ASTM A157 Gr. C9, A320 Gr. B8C or D.						
Typical analysis of solid wire (wt.-%)						
C	Mn	Si	Cr	Ni		
0.02	1.7	0.9	20.0	10.0		
Structure: Austenite with part ferrite						
Mechanical properties of all-weld metal						
Heat-treatment	Yield strength R _{p0.2}	Yield strength R _{p1.0}	Tensile strength R _m	Elongation A (L ₀ =5d ₀)	Impact work ISO-V CVN J	
	MPa	MPa	MPa	%	20°C	-196°C
aw	350 (≥ 320)	370	570 (≥ 510)	38 (≥ 35)	75	≥ 32
Operating data						
	Ø (mm)	Polarity: DC (+)	Shielding gas: (EN ISO 14175) M11, M12, M13	Spool:		
	0.8			BS300		
	1.0			B300		
	1.2	B300				
Welding instruction						
Materials			Preheating	Postweld heat treatment		
Matching and similar non-stabilized and stabilized austenitic CrNi(N) steels / cast steel grades			None	Mostly none. If necessary, solution annealing at 1000 °C (1832 °F)		
Cryogenic austenitic steels / cast steel grades			None	None		
Approvals						
TÜV (00555) • DB (43.132.08) • DNV GL • CE						