

Classifications						
EN ISO 14343-A	EN ISO 14343-B	AWS A5.9	Mat. No.			
W 19 12 3 L	SS316L	ER316L	1.4430			
Characteristics and typical fields of application						
<p>Stainless; resistant to intercrystalline corrosion and wet corrosion up to 400 °C (752 °F). Corrosion-resistance similar to matching low-carbon and stabilized austenitic 18/8 CrNiMo steels / cast steel grades. For joining and surfacing application with matching and similar – non-stabilized and stabilized – austenitic CrNi(N) and CrNiMo(N) steels and cast steel grades.</p>						
Base materials						
<p>TÜV-certified parent metal 1.4583 – X10CrNiMoNb18-12; S31653, AISI 316L, 316Ti, 316Cb</p>						
Typical analysis of the TIG rods (wt.-%)						
	C	Si	Mn	Cr	Mo	Ni
wt-%	0.02	0.5	1.7	18.5	2.6	12.3
<b>Structure:</b> Austenite with part ferrite						
Mechanical properties of all-weld metal						
Heat-treatment	Yield strength R <sub>p0.2</sub>	Yield strength R <sub>p1.0</sub>	Tensile strength R <sub>m</sub>	Elongation A (L <sub>0</sub> =5d <sub>0</sub> )	Impact work ISO-V KV J	
	MPa	MPa	MPa	%	+20 °C	
aw	450	480	580	35	100	
Operating data						
<b>Polarity:</b> DC (–)	<b>Shielding gas:</b> (EN ISO 14175) I 1	<b>Marks:</b> ✦ W 19 12 3L / ER316L		<b>ø (mm)</b>	<b>L mm</b>	
				1.0	1000	
				1.2	1000	
				1.6	1000	
				2.0	1000	
				2.4	1000	
				4.0	1000	
Welding instruction						
Materials		Preheating	Postweld heat treatment			
Matching and similar non-stabilized and stabilized steels / cast steel grades		Keine	Mostly none. If necessary, solution annealing at 1050°C (1922°F) – pay attention to tendency to embrittlement			
Approvals						
TÜV (09500) DB (43.132.20), DNV, GL, CE						