

## Classifications

EN ISO 14343-A	AWS A5.9	Mat. No.
G 19 12 3 Nb Si	ER318(mod.)	1.4576

## Characteristics and typical fields of application

Stainless; resistant to intercrystalline corrosion and wet corrosion up to 400 °C (752 °F). Corrosion-resistant similar to matching stabilized CrNiMo steels. For joining and surfacing application on matching and similar – stabilized and non-stabilized – austenitic CrNi(N) and CrNiMo(N) steels and cast steel grades.

## Base materials

TÜV-certified parent metal  
1.4583 – X10CrNiMoNb18-12; AISI 316L, 316Ti, 316Cb

## Typical analysis of solid wire (wt.-%)

	C	Si	Mn	Cr	Mo	Ni	Nb
wt-%	0.05	0.8	1.5	19.0	2.8	12.0	≥ 12xC

**Structure:** 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	390	410	600	30	70

## Operating data

Polarity:	Shielding gas:	ø (mm)	Spool:
DC ( + )	(EN ISO 14175) M12, M13	0.8	BS300
		1.0	B300
		1.2	B300

## Welding instruction

Materials	Preheating	Postweld heat treatment
Matching / similar steels / cast steel grades	None	Mostly none. If necessary, solution annealing at 1050 °C (1922 °F) – pay attention to tendency to embrittlement

## Approvals

TÜV (00601), DB (43.132.02), CE