

INERTFIL 318Si is a G 19 12 3 Nb Si type solid MAG welding wire supplied precision layer wound, depositing a C-19Cr12Ni2.5Mo weld metal stabilised with niobium. Suitable for use with Ar+2%O₂ or Ar+0.5...5%CO₂ mixed shielding gases.

INERTFIL 318Si is used for the welding of 316Ti and 316Nb stainless steels. It is used for a range of applications including the fabrication of pipe, plate and vessel. The weld metal has a high resistance to crevice corrosion by oxidising acids.

The increased silicon results in increased weld pool fluidity to give a smooth deposit appearance.

Stainless steel wire for welding stabilized austenitic type AISI 318 steels. The presence of the stabilizer improves resistance to precipitation of chromium carbides.

Classification	
EN ISO	14343-A: G 19 12 3 Nb Si
AWS	AWS 5.19: ~ER318 (nearest classification)

Approvals	Grade
DB	●
TÜV	●

Chemical analysis (Typical values in %)

C	Mn	Si	P	S	Cr	Ni	Mo	Nb
0.04	1.4	0.85	≤ 0.025	≤ 0.020	19	12	2.7	0.5

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				+20 °C	-110 °C
As Welded	≥400	≥550	≥30	≥65	≥32

Gas test: 98% Ar+2% O₂

Shielding Gas - EN ISO 14175 : M12, M13

Materials

1.4571 (X6CrNiMoTi17-12-2) - 1.4401 (X4CrNiMo17-12-2)

1.4583 (X10CrNiMoNb18-12)

1.4581 (GX5CrNiMoNb19-10) - 1.4436 (X4CrNiMo17-13-3)

1.4580 (X6CrNiMoNb17-12-2) - 1.4408 (GX5CrNiMo19-11)

Storage

Keep dry and avoid condensation

Current condition and welding position

DC+



Packaging data

Packaging Type	BS300
Diam(mm) / weight(kg)	15
1.0	W000283088
1.2	W000283089