

# Solid Wire Rod for TIG Welding

# BA-TIG 318

**Classification:** EN ISO 14343-A: **W 19 12 3 Nb**  
SFA-5.9: **ER318**

## Main Application:

BA-TIG 318 is a solid wire rod for GTAW, suitable to weld 19Cr/12Ni/3Mo stabilized Ti grades like 1.4571 / 316Ti. Also suitable for the welding of similar unstabilized grades 316 or 316L. BA-TIG 318 is suitable for service temperatures from -120 °C to +400 °C and has high resistance to intergranular corrosion.

**Typical analysis and chemical composition acc. to EN ISO 14343-A and AWS A5.9:** (Weight Percent)

Wire rod	C	Si	Mn	Mo	Ni	Cr	Nb	P	S	Cu total
Typical analysis BA-TIG 318Si	0.04	0.45	1.7	2.6	12.0	19.0	0.6	0.020	0.013	0.15
W 19 12 3 Nb Si acc. to ISO 14343-A	0.08	0.65	1.0-2.5	2.5-3.0	11.0- 14.0	18.0- 20.0	10xC to 1.0	0.03	0.02	0.3
ER318 acc. to AWS A5.9	0.08	0.3-0.65	1.0-2.5	2.0-3.0	11.0- 14.0	18.0- 20.0	8xC to 1.0	0.03	0.03	0.75

## All - Weld Metal Mechanical Properties / Welding Data:

Heat Treatment: As Welded  
Yield Strength Re, N/mm<sup>2</sup> (ksi): 380 (55)  
Tensile Strength Rm, N/mm<sup>2</sup> (ksi): 550 (80)  
Elongation A5 [%]: >25  
Impact Energy ISO-V, J (ft lbs): +20°C: 70 (52)  
Current/polarity: DC -  
Shielding Gas: ISO 14175: I1

## Base Materials:

1.4571/ X6CrNiMoTi17-12-2, 1.4580/ X6CrNiMoNb17-12-2, 1.4401/ X5CrNiMo17-12-2, 1.4581/ GX5CrNiMoNb19-11-2, 1.4437/ GX6CrNiMo18-12, 1.4583/ X10CrNiMoNb18-12, 1.4436/ X3CrNiMo17-13-3, AISI 316L, 316Ti, 316Cb

## Package Forms:

5 kg carton boxes as standard package form for GTAW wire rods.

## Diameter:

1,2 – 3,2 mm. Sizes and tolerances acc. to ISO 544 and AWS A5.9.

## Wire Rod Surface:

Smooth finish free from surface defects and foreign matter.