

Solid Wire Rod for TIG Welding

BA-TIG 307Si

Classification: EN ISO 14343-A: **W 18 8 Mn**
SFA-5.9: **ER(307)**

Main Application:

BA-TIG 307Si is a solid wire rod for GTAW, intended for welding work-hardenable steels, armor steel and austenitic stainless manganese steels. Also suitable for joining stainless chromium steels with chromium content up to 18% and overlay welding of mild steels and low-alloy steels. BA-TIG 307Si is similar to ER 307 type with increased manganese content ($\approx 7.0\%$), reducing the risk for hot cracking.

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	P	S	Cu total
Typical analysis BA-TIG 307Si	0.08	0,8	7.0	0.1	8.0	18.5	0.020	0.013	0.2
W 18 8 Mn acc. to ISO 14343-A	0.20	1.20	5.0-8.0	0.3	7.0-10.0	17.0-20.0	0.03	0.03	0.3
ER(307) acc. to AWS A5.9	0.04-0.14	0.30-0.65	3.3-4.75	0.5-1.5	8.0-10.7	19.5-22.0	0.03	0.03	0.75

All - Weld Metal Mechanical Properties / Welding Data:

Heat Treatment	As Welded
Yield Strength Re, N/mm ² (ksi)	420 (61)
Tensile Strength Rm, N/mm ² (ksi)	600 (87)
Elongation A5 [%]	>35
Impact Energy ISO-V, J (ft lbs)	+20°C: 120 (103)
Current/polarity	DC -
Shielding Gas	ISO 14175: I1

Base Materials:

Dissimilar joints, buttering and intermediate layers before hard overlays.
Steels with manganese content up to 14%, steels with 13 - 17% chromium content.

Package Forms:

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

Diameter:

1,0 – 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.