

Solid Wire Electrode for MIG/MAG Welding

BA-TIG 420

Classification: SFA-5.9: ER420

Main Application:

BA-TIG 420 is a solid wire rod for GTAW, often used for surfacing applications which need superior resistance to abrasion. It requires preheat and inter-pass temperatures $\geq 225^{\circ}\text{C}$, followed by slow cooling. Post weld heat treatment is used to temper the weld deposit. BA-TIG 420 is similar to BA-TIG 410, but with higher chromium and carbon content which increases the wear resistance.

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 420	0.30	0.35	0.45	0.25	0.30	13.0	0.02	0.02	0.3
ER420 acc. to AWS A5.9	0.25- 0.40	0.5	0.6	0.75	0.6	12.0- 14.0	0.03	0.03	0.75

All - Weld Metal Mechanical Properties / Welding Data:

Heat Treatment	PWHT: 750°C x 1h
Yield Strength Re, N/mm ² (ksi)	≥ 400 (58)
Tensile Strength Rm, N/mm ² (ksi)	≥ 470 (68)
Elongation A5 [%]	≥ 16
Impact Energy ISO-V, J (ft lbs)	
Current/polarity	DC -
Shielding Gas	ISO 14175: I1

Base Materials:

AISI 420, X12Cr13: hardfacing results in higher hardness than with ER410.

Package Forms:

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

Diameter:

1,6 – 2,4 mm. Sizes and tolerances acc. to ISO 544 and AWS A5.9.

Wire Rod Surface:

Smooth finish free from surface defects and foreign matter.