TIG rod / Solid wire
High-alloyed, Corrosion-resistant

AX-410

Material no.: 1.4009

Standards

EN ISO 14343-A:	W 13 / G 13
AWS A5.9:	ER410

Properties

AX-410 is suitable for welding stainless steels with 12 - 14% Cr. Primarily used for sealing surface applications on fittings made of unalloyed or low-alloy steels for operating temperatures up to 450°C. The machinability of the weld metal largely depends on the degree of dilution. Outstanding sliding and feeding characteristics. Very good welding and flow behaviour. Colour matching on joint welds of 13% Cr steels of the same type, with very good polishing properties.

Important base materials / Important applications

Ferritic chrome steels as 1.4000 X7Cr13, 1.4008 G-X12Cr14, 1.4001 X7Cr14, 1.4021 X20Cr13, 1.4002 X7CrAl13, 1.4024 X15Cr13, 1.4006 X10Cr13.

Typical composition of welding rod / solid wire in %

C	Si	Mn	Cr
0,11	0,4	0,5	13,2

Mechanical properties of all-weld metal (typical values)

Yield strength $R_{p0,2}$	[MPa]	480		annealed, 720°C/2h
Tensile strength R_m	[MPa]	630		annealed, 720°C/2h
Elongation A ($L_0 = 5d_0$)	[%]	22		annealed, 720°C/2h
Hardness	[HB]	180	at RT	annealed, 720°C/2h
Hardness	[HB]	310	at RT	Untreated, as welded

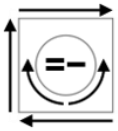
Shielding gas: Argon + 8-10%CO_2

The hardness of the weld metal is primarily influenced by the dilution with the base material concerned and its chemical composition. The greater the dilution and the C content of the base material, the harder the weld metal. Shielding gases with higher CO_2 contents also lead to higher hardness.

Operating data

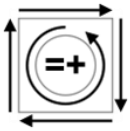
TIG:

Shielding gas: I1 (100%Argon)
acc. to ISO 14175



GMAW:

M12 (e.g. Ar+2,5%CO_2)
M13 (e.g. Ar+3%O_2)
M20 (e.g. Ar+8%CO_2)
M21 (e.g. Ar+18%CO_2)
M12 or M13 is recommended for joint welding.



Preheating to 200°C – 300°C is necessary for joint welds. Tempering to increase toughness at 700-750°C is recommended.

Approvals

(Please ask for current scope)

Packaging and available sizes

Spools	Ø mm	0,8	1,0	1,2	1,6		
Rods	Ø mm x 1000mm	1,6	2,0	2,4	3,2		

Other dimensions on request.