

410 Tig

CATEGORY GMAW-GTAW Solid wires

TYPE Stainless steel filler metal with 13% Chromium for overlay welding and joining.

APPLICATIONS Overlay of carbon and low-alloy steels for resistance to corrosion, erosion, or abrasion. 410 has higher hardness and is used in valve seats to obtain better galling resistance. Normally to obtain adequate ductility, preheat and post-weld heat-treatment are required.

PROPERTIES 410 is a martensitic stainless steel that is heat-treatable. It has a nominal weld metal composition of 12% Chromium. These weld deposits are air-hardenable that can normally be heat-treated after welding.

CLASSIFICATION

AWS	A 5.9: ER 410
EN ISO	14343-A: W Z 13
DIN: W.Nr.	1.4009
DIN	8556: SG-X 8 Cr 14

SUITABLE FOR For welding or repairing 12% Cr air-hardenable stainless steels like types 410, 416, 420, 431 and cast C-15, W.Nr: 1.4008, 1.4000, 1.4006, X8Cr14, X6Cr13, X10Cr13 and cast steels.

APPROVALS CE approved

WELDING POSITIONS:



WELD DEPOSIT WEIGHT % (TYPICAL)

C	Mn	Si	Cr	Ni	Mo	Cu
< 0,12	< 0,60	< 0,50	12-13,5	< 0,60	< 0,75	< 0,40

MECHANICAL PROPERTIES

Heat Treatment	R _{p0,2} (N/mm ²)	R _m (N/mm ²)	A ₅ (%)	Impact Energy (J) ISO-V			Hardness HRc / HB
				-20°C	-40°C	-60°C	
AW							35 HRc
PWHT 680C/8hr	>450	>650	>15				180 HB 30

PWHT: Post weld heat treatment

WELDING PARAMETERS PACKING

D (mm)	Welding Parameters		Packing (kg)	
	Voltage (V)	Current (A)	kg / single	kg / master
1.6 x 1000	50-80	DC-	5	25
2.0 x 1000	70-110	DC-	5	25
2.4 x 1000	110-180	DC-	5	25
3.2 x 1000	150-250	DC-	5	25

GAS ACC ISO 14175: I1