MIG M13/0

Classification

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

Description & Applications

Solid wire for GMAW of 13% Chromium content martensitic stainless steels like stainless steels grade 403, 405, 416…. Resistant to atmosphere corrosion, water corrosion and light acids. Good resistance against oxidazing exhaust gas with service temperature up to +900°C. Mainly applied in welding and hardfacing of piping systems working at service temperature up to +450°C.

Main applications: Automotive (Exhaust system), piping system.

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	Co
Min				12.0				-			-
Max	0.12	0.50	0.6	13.5	0.5	0.5	0.5	-	0.03	0.02	-
Type	0.10	0.30	0.50	13.0	0.20	0.02	0.06	0.01	0.02	0.01	0.05

All Weld Metal Mechanical Properties

	$R_{p0.2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)	
Min	250	520	20	-	-
Max				-	-
Type	300	550	21	+20°C	90

* After PWHT at 750°C/1h

Welding Current & Instructions

Welding mode	Wire Ø (mm)	Welding parameters		Shielding Gas
		Current (A)	Voltage (V)	
GMAW = +	0.8 1.0 1.2 1.6	70 - 180 80 - 220 150 - 320 220 - 380	18 - 26 18 - 28 22 - 32 24 - 34	ISO 14175: M12 (Ar+0.5-5%CO_2) M13 (Ar+0.5-3%O_2) 15-20 l/min

Back shielding with Argon or Nitrogen gas or with copper backing support to avoid “back end” rust phenomena.