MIG 24/12S

Classification

AWS A5.9 : ER309LSi ISO 14343-A : G 23 12 L Si

Description & Applications

Low carbon solid wire with increased Silicon content for GMAW of stainless steels with similar chemical composition like 309 and 309L. Well adapted for welding of dissimilar steels like low alloy steels, ferritic stainless steel like 430, martensitic stainless steel like 410. Also suitable for welding high temperature steels and as buffer layer before hardfacing.

Its high ferrite content allows greater dilution without risk of cracking. High Silicon content improves alloy fluidity during welding.

Main applications: Boiler making, civil engineering, maintenance and repairs…

Typical Chemical Composition (%)

	C	Si	Mn	Cr	Ni	Mo	Cu	Nb	P	S	Co	N
Min		0.65	1.0	23.0	12.0			-			-	-
Max	0.03	1.00	2.5	25.0	14.0	0.5	0.5	-	0.03	0.02	-	-
Type	0.015	0.85	1.8	23.3	13.7	0.10	0.10	0.01	0.02	0.01	0.06	0.08

Delong ferrite: ~12%

All Weld Metal Mechanical Properties

	$R_{p0.2}$ (MPa)	R_m (MPa)	A_5 (%)	KV (J)	
Min	320	510	25	-	-
Max				-	-
Type	420	600	35	+20°C	130

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.