

SW-309MoL Cored

Type : Rutile

Conformances

AWS A5.22/ ASME SFA5.22 E309LMoT1-1/-4
 JIS Z3323 TS309LMo-FB1
 EN ISO 17633-A-T 23 12 2 L P M21/C1 2
 KR RW 309MoLG(C)
 ABS AWS A5.22 E309LMoT1-1/4
 LR AWS A5.22 E309LMoT1-1
 BV 309Mo (C1)

DNV-GL VL 309MoL (-20°C)
 NK KW309MoLG(C)
 CWB AWS A5.22 E309LMoT1-1/4
 RINA 309Mo
 RS A-9sp(309Mo) (C1)

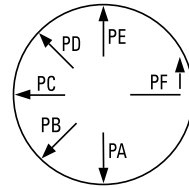
Applications

- 22%Cr-12%Ni-2.5%Mo stainless steels
- Dissimilar welds between carbon, low alloy steels to stainless steels
- Buffer layer welding for cladding, overlays

Features

- Good performance in all positions

Welding Position



Current

DC +

Shielding Gas

100% CO₂
 Ar + 20~25% CO₂

Diameter / Packaging

Diameter mm (in)	Spool			Pac		
	5kg (11lbs)	12.5kg (27.6lbs)	15kg (33lbs)	250kg (551lbs)	300kg (661lbs)	350kg (771lbs)
0.9 (0.035)	√	√	√			
1.0 (0.040)	√	√	√			
1.2 (0.045)	√	√	√			
1.4 (0.052)	√	√	√			
1.6 (1/16)		√	√			

Typical Chemical Composition of All-Weld Metal (%)

	C	Si	Mn	P	S	Cr	Ni	Mo
100% CO ₂	0.031	0.64	1.39	0.021	0.010	12.42	22.24	2.37
80% Ar + 20% CO ₂	0.035	0.75	1.35	0.021	0.015	12.47	22.34	2.20

Typical Mechanical Properties of All-Weld Metal

	TS MPa(lbs/in ²)	EL (%)	Temp °C(°F)	CVN-Impact Value J (ft.-lbs)
100% CO ₂	693 (100,485)	32.4	-60 (-76)	44 (32.4)
80% Ar + 20% CO ₂	661 (95,845)	29.6	-60 (-76)	44 (32.4)

Typical Welding Parameters

Diameter, Polarity Shielding Gas	CTWD mm (in)	Wire Feed Speed m/min (in/min)	Amp. (A)	Volt. (V)	Deposition Rate kg/hr (lb/hr)
1.2mm (0.045 in) DC+					
100% CO ₂	20 (4/5)	6.0 (236)	140	23-26	2.5 (5.5)
		9.0 (354)	180	27-30	3.6 (7.9)
		12.0 (472)	210	28-31	4.6 (10.1)
80% Ar + 20% CO ₂	20 (4/5)	6.2 (244)	140	23-26	2.6 (5.7)
		9.1 (358)	180	27-30	3.6 (7.9)
		12.0 (472)	210	27-30	4.7 (10.4)
1.6mm (1/16 in) DC+					
100% CO ₂	25 (1)	3.8 (150)	180	24-27	2.9 (6.4)
		6.2 (244)	250	25-28	4.4 (10.1)
		8.8 (346)	290	26-29	5.6 (12.3)
80% Ar + 20% CO ₂	25 (1)	3.6 (142)	180	24-27	3.1 (6.8)
		6.3 (248)	250	25-28	4.5 (9.9)
		8.7 (343)	290	26-29	5.5 (12.1)

SWAW

SAW

GMAW

GTAW

FCAW

Non-FERROUS

APPENDIX