

FLUX CORED STAINLESS STEEL ELECTRODES DM309LMOT-1

Classification: E309LMOTX-X AWS A5.22 ASME SFA 5.22

Description, Characteristics & Applications:

The composition of this weld metal is the same as E309MOTX-X except for lower carbon content. Use these electrodes to join stainless steel to carbon and low alloy steels for services below 600° F. Use for overlay. Ferrite is 20FN deposited.

For best results, set the wire feed speed and adjust the voltage for smoothest operation. Electrode extension range is from 1/2" to 1," with an optimum range of 5/8" to 3/4." Weld using reverse polarity DC(+).

Shielding Gas

75% argon / 25% CO₂ (or nearest equivalent) shielding gas; however, straight CO₂ may also be used. The 75/25 mixture will produce a smoother arc with virtually no spatter and slightly higher yield and tensile strengths than CO₂. The mechanical properties and deposit analyses will meet AWS A5.22 specifications with either gas.

Typical Chemical Composition (%)

C	Cr	Ni	Mo	Mn	Si	P	S	Cu
0.04 max	21.0-25.0	12.0-16.0	2.0-3.0	0.5 - 2.5	1.00 max	0.04 max	0.03 max	0.75 max

Deposited Chemical Composition (%) (Typical)

C	Cr	Ni	Mo	Mn	Si	P	S
0.03	23.0	12.5	2.3	1.20	0.60	0.015	0.01

Typical Mechanical Properties as Welded

Tensile Strength	Yield Strength	Elongation (%)	Hardness	Ferrite WRC (FN)	CVN Impacts (J)	
					@	°C
90,000psi	60,000psi	34%	-----	19 FN	-----	-----

Diameter	Position	WFS	Opt Amps	Opt Volts	Range Amps	Range Volts
.035	Flat	365 / min	130-140	24-25	100-170	21-26
	Horizontal	365 / min	130-140	24-25	100-170	21-26
	Vertical-Up	310 / min	110-120	22-23	110-120	21-23
	Overhead	320 / min	120-130	23-24	120-130	22-24
.045	Flat	450 / min	180-200	25-27	135-250	24-32
	Horizontal	450 / min	180-200	25-27	135-250	24-32
	Vertical-Up	325 / min	150-170	24-26	135-200	24-26
	Overhead	425 / min	175-195	25-27	155-200	25-28
1/16	Flat	264 / min	220-240	25-27	170-300	24-31
	Horizontal	235 / min	200-220	25-27	170-270	24-29
	Vertical-Up	220 / min	190-210	25-26	170-230	24-27
	Overhead	235 / min	200-220	25-26	170-270	24-29

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