

Flux Cored Stainless Steel Electrodes

(Gas Shielded)

Alloy: WW2209T-1
Class: E2209TX-X

Conforms to Certification: AWS A5.22
ASME SFA A5.22

Alloy: E2209T-1

Weld Process: Gas Metal Arc

AWS Chemical Composition Requirements

C = 0.04 max	Si = 1.0 max
Cr = 21.0 – 24.0	P = 0.04 max
Ni = 7.5 – 10.0	S = 0.03 max
Mo = 2.5 – 4.0	Cu = 0.75 max
Mn = 0.50 – 2.0	N = 0.08 – 2.0

Deposited Chemical Composition % (Typical)

C = 0.03	Cr = 22.0	Ni = 8.5
Mo = 3.5	Mn = 1.5	Si = 0.55
P = 0.002	S = 0.001	N = 1.00

Deposited All Weld Metal Properties %

As-Welded

Tensile Strength	101,000psi
Yield Strength	87,000psi
Elongation	22%

Deposited Charpy-V-Notch Impact Properties %

Not applicable

Application

This electrode is used to join duplex stainless steel base metals containing approximately 22% chromium. This alloy is in one of the family of duplex stainless steel alloys. This alloy has good resistance to stress corrosion cracking.

Suggested Welding Parameters

Diameter .035

	<u>Optimum Parameters</u>			<u>Operating Range</u>	
	Wire Feed Speed	Amps	Volts	Amps	Volts
Flat	365" / minute	130-140	24-25	100-170	21-26
Horizontal	365" / minute	130-140	24-25	100-170	21-26
Vertical-Up	310" / minute	110-120	22-23	110-120	21-23
Overhead	320" / minute	120-130	23-24	120-130	22-24

Diameter .045

	<u>Optimum Parameters</u>			<u>Operating Range</u>	
	Wire Feed Speed	Amps	Volts	Amps	Volts
Flat	450" / minute	180-200	25-27	135-250	24-32
Horizontal	450" / minute	180-200	25-27	135-250	24-32
Vertical-Up	325" / minute	150-170	24-26	135-200	24-26
Overhead	425" / minute	175-195	25-27	155-200	25-28

Diameter 1/16

	<u>Optimum Parameters</u>			<u>Operating Range</u>	
	Wire Feed Speed	Amps	Volts	Amps	Volts
Flat	264" / minute	220-240	25-27	170-300	24-31
Horizontal	235" / minute	200-220	25-27	170-270	24-29
Vertical-Up	220" / minute	190-210	25-26	170-230	24-27
Overhead	235" / minute	200-220	25-26	170-270	24-29

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.

