

SelectAlloy 2209C

Description:

SelectAlloy 2209C is a metal cored electrode designed to weld duplex stainless steels of 22Cr-9Ni-2Mo-N type. The weld deposit has a 'duplex' microstructure of austenite and ferrite and normally gives ferrite in the range of 25 to 40 FN. It has very good resistance to intergranular corrosion, pitting and to stress corrosion cracking in environments containing H₂S and chlorides. It is designed for use with argon/1-2% oxygen or argon/1-2% CO₂ shielding gases.

Classification:

- EC2209 per AWS A5.22 (Also per AWS A5.9:2006)

Characteristics:

SelectAlloy 2209C operates with a smooth, spray arc transfer. It produces little or no slag and virtually no spatter, minimizing cleanup. It offers higher deposition rates and more controlled penetration than the equivalent solid electrode. As a result it operates at higher travel speeds and handles poor fit-up.

Applications:

SelectAlloy 2209C is ideally suited for making small butt, lap and fillet welds on thin material at elevated travel speeds. It finds application in the chemical and fertilizer industries, off-shore pipelines and sour gas lines. It is used to weld 2205, 2304 and other similar types of duplex stainless steel.

Typical Mechanical Properties (98% Ar-2% O₂):

Ultimate Tensile Strength (psi)	117,000
Yield Strength (psi)	93,200
Percent Elongation	25

Typical Weld Deposit Chemistry (98% Ar-2% O₂):

<u>C</u>	<u>Cr</u>	<u>Ni</u>	<u>Si</u>	<u>Mo</u>	<u>Mn</u>	<u>N</u>
0.02	22.50	8.40	0.70	3.10	1.30	0.15
Ferrite Number (WRC, 1992) - 40						

Typical Welding Parameters (Ar-2%O₂)*:

Diameter	WFS (ipm)	Amperage	Voltage	ESO	Dep. Rate (lbs/hr)
.045"	250	180	21	1/2"-5/8"	7.1
.045"	400	240	23	1/2"-5/8"	11.3
.045"	500	280	25	1/2"-5/8"	14.1
.045"	650	300	28	1/2"-5/8"	18.4
1/16"	150	190	24	3/4"-1"	7.7
1/16"	250	280	25	3/4"-1"	12.8
1/16"	350	385	26	3/4"-1"	17.9
1/16"	450	490	32	3/4"-1"	23.1

* Optimum conditions are in **boldface type**.

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Notice: The results reported are based upon testing of the product under controlled laboratory conditions in accordance with American Welding Society Standards. Actual use of the product may produce different results due to varying conditions. Thus the results are not guarantees for use in the field. The manufacturer disclaims any warranty of merchantability or fitness for any particular purpose with respect to its products.