

Shield-Bright 2209

Shield-Bright 2209 was developed for the welding of "2205" duplex stainless steels (UNS S31803, S32205, and J92205). It can also be used for the welding of leaner grades of duplex stainless steels. It has been approved with a 25°C critical pitting temperature and impact toughness at -40°C (-40°F).

Approvals	CWB AWS A5.22 E2209T1-1 DNV-GL Duplex (M21) E2209T1-4 VdTUV 09123 LR S31803 (C1) DNV Duplex (C1) CCS 2205-S (C1) BV 2205 (C1) ABS E2209T1-1 (C1) CE EN 13479
Industry	Petrochemical Pipeline Process Pulp and Paper

Approvals are based on factory location. Please contact ESAB for more information.

Welding Current	DC+
Alloy Type	Ni, Cr, Mo, N
Shielding Gas	M21, C1 (EN ISO 14175)

Typical Tensile Properties

Yield Strength	Tensile Strength	Elongation
80%Ar/20%CO₂ Shielding Gas (M21)		
CO₂ Shielding Gas (C1)		
CO₂ Shielding Gas (C1)		

Typical Charpy V-Notch Properties

Testing Temperature	Impact Value
80%Ar/20%CO₂ Shielding Gas (M21)	
-20 °C (-4 °F)	55 J (40.5 ft-lb)
-45 °C (-49 °F)	45 J (33 ft-lb)
-46 °C (-51 °F)	52 J (38 ft-lb)
CO₂ Shielding Gas (C1)	
-46 °C (-51 °F)	50 J (37 ft-lb)

Typical Weld Metal Analysis %

C	Mn	Si	S	P	Ni	Cr	Mo	N	Ferrite FN
0.03	0.90	0.35	0.012	0.025	9.2	22.5	3.2	0.16	40

Deposition Data

Diameter	Current	Voltage	Wire Feed Speed	Deposition Rate
1.2 mm (0.045 in.)	130-220 A	25-30 V	5.8-14.4 m/min (228-567 in./min)	1.9-4.6 kg/h (4.2-10. lb/h)
1.6 mm (1/16 in.)	170-300 A	25-29 V	3.9-8.2 m/min (154-323 in./min)	2.4-5.2 kg/h (5.3-11. lb/h)