

ROYALFIL GS 209 (E2209T1-1)

AWS A / SFA 5.22 E312T1-1 EN ISO 17633 A T299RC1

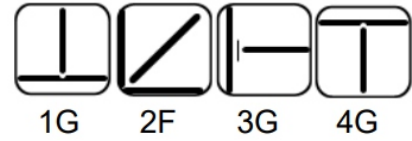
Applications

Royalfil-GS 209 used for welding of Duplex stainless steel which contain approximately 22% Chromium. Also used for joining of Duplex steels to mild steels, cladding of Duplex stainless steel weld metal on Carbon steel/low alloy steel. Used for piping in gas & oil industry, off-shore platforms, welding of duplex stainless steels 1.4417, 1.4460, 1.4462

Characteristics on Usage

Royalfil GS- 209 is a Duplex stainless steel flux core welding wire for welding with Co₂ shielding gas. The nominal composition of the weld metal is 22 % Cr., 9 % Ni., 3 % Moly., & 0.15 % N. The microstructure of the weld deposit consists of a mixture of Austenite & Ferrite. Because of the two phase microstructure, this alloy is one of the family of duplex stainless steel alloys. The alloy has high tensile strength & has good resistance to stress corrosion cracking & pitting corrosion Welding of Duplex steels should be made with low heat input. Weld metal is of radiographic quality.

Welding Positions



Recommended Stick Out

15-20mm

OutShielding Gas

Carbon Dioxide (CO₂) Shielding
Gas Flow : 15-20 Lit / Min

Chemical Composition Of Weld Metal

C%	Mn%	Si%	S%	P%	Cr%
0.04 Max	0.5-2.5	1.0 Max	0.030 Max	0.040 Max	21-24
NI%	Mo%	Cu%			
7.5-10.0	2.5-4.0	0.08-0.20			

Mechanical Properties Of Weld Metal

U.T.S. (N/mm ²)	ELONGATION. (L = 4d) %
690-780 Min	20-25 Min

Welding Parameters (DC + VE)

Diameter (mm)	Flat & Horizontal (A)	Flat & Horizontal (V)	Vertical - Up (V)	Vertical - Up (V)	Overhead (V)	Overhead (V)
1.20	160-210	26-30	120-160	22-26	150-180	26-30
1.60	190-250	26-30	160-200	22-27	180-210	26-30

Packing

15 kgs. Vacuum packed plastic spool