

Classification

AWS A5.9

ER2209

Characteristics and typical fields of application

- Is primarily designed for welding the duplex grade and similar grades but can also be used for welding SAF 2304 type of steels.
- Provides a ferritic-austenitic weldment that combines many of the good properties of both ferritic and austenitic stainless steel.
- Welding without filler metal (i.e. TIG dressing) is not allowed since the ferrite content will increase.

Base Materials

Outokumpu 2205; EN 1.4462; ASTM S32205; BS 318S13; NF Z7 CND 22-05 Az; SS 2377

Typical analysis of solid wire (wt.-%)

C	Si	Mn	Cr	Ni	Mo	N
0.015	0.48	1.67	22.86	8.70	3.00	0.18

Ferrite Number ≈ 50 FN WRC92

Mechanical properties of all-weld metal

Heattreat-ment	Yield strength R _e N/mm ²	Tensile strength R _m N/mm ²	Elongation (L ₀ =5d ₀)	Impact work ISO-V KV J	
	MPa	MPa	%	+ 20 °C	-40°C
Min. EN 14343	450	550	20	-	-
Typical	≥ 610	≥ 780	≥ 36	243	238

Hardness Approx. 200 Brinell

Operating data

Heat Input	: 0.5 - 2.5 kJ/mm
Interpass temperature	: Max. 150°C
Scaling Temperature	: Approx. 850°C
Shielding Gas	: The most frequently used shielding gas is pure Argon (Ar) with a gas flow of 6 – 8 l/min. Additional of 30% He will increased the energy of the arc.

Approvals

DNV

Size, Packaging and Electrical Operating Data

Size (mm)	Kg / Tube	Kg / Box	Voltage (V)	Amperage (A)
1.60	5.0	20.0	10 – 12	80 – 110
2.00	5.0	20.0	14 – 16	100 – 130
2.40	5.0	20.0	16 – 18	130 – 160