

# GM 2209

## IDENTIFICATION

GM 2209, ER 2209

## CLASSIFICATION

AWS/SFA 5.9: ER 2209, BS 2901: Pt2 22.8.3S92

## DESCRIPTION

Solid duplex stainless wire for welding 2205 type duplex stainless steels.

## CHEMICAL ANALYSIS (RANGE) %

C	Mn	Si	S	P	Cr	Ni	Mo	Cu	N
0.03 max	1.0 - 2.0	0.9 max	0.03 max	0.03 max	21.5 - 23.5	7.5 - 9.5	2.5 - 3.5	0.5 max	0.08 - 0.20

## MECHANICAL PROPERTIES (RANGE)

UTS (MPa)	EL (%) (L=4D)	CVN Impact Value	
		Temp	Joules
690 min	20 min	-30°C	>140

## TYPICAL APPLICATIONS

- Standard duplex stainless steels UNS S31803 (wrought) J92205 (cast), ASTM F51, DIN 1.4462, BS 1501 318S13.
- Proprietary alloys such as Hy-Resist 22/5 (Avesta Sheffield), SAF 2205 (Sandvik), AF22 (Mannesmann), Uranus 45N (Creusot).
- The wire is designed for MIG welding standard duplex stainless steels meeting the requirements of UNS S31803. It over-matches the parent material by 2-3% with respect to Ni to give the correct micro- structural balance of austenite & ferrite in the as-welded condition. Used for pipe-work & general fabrication in the off-shore oil & gas & chemical process industries.

Duplex weld metal microstructure with austenite + 30-50% ferrite. Pitting resistance equivalent PRE = %Cr + 3.3 % Mo + 16% Ni is > 35

**HARDNESS** : 23 (<28) HRc

**SHIELDING GAS** : (88% Argon + 10% He + 2% N) : As recommended

**BLACK PURGE** : (88% Argon + 10% He + 2% N) : As recommended

## PACKING PARAMETERS

Size (mm)	Weight / Spool (kg)
0.8	12.5
1	12.5

1.2	12.5
1.6	12.5