

NST MIG Super Duplex 2594

AWS SFA5.9 ER2594

EN ISO 14343: 2009 25 9 4 N L



Specially developed MIG wire for welding super-duplex steels.

General description:

NST MIG Super Duplex 2594 is used for welding of Super Duplex materials as SAF2507, Zeron 100 and similar.

Normally Ar, Argon/O₂ or Argon/CO₂ mix are used as the shielding gas.

The MIG wire is used for both manual welding and mechanized/robotic welding of both pipes and plates. The balance of Austenite and Ferrite in the weld metal will depend upon welding parameters, choice of gas and cooling rate. For backing gas use Pure N₂ or Argon/N₂ mix

"Purity" is the keyword when welding high alloyed materials. Impurities in the weld, will cause porosity. Welding of pipes require use of purge gas in order to ensure a stainless root face of the weld.

Inter-pass temperature should not exceed 100 °C, and heat input should not exceed 1,5 Kj /mm

Please contact us for further details on purge equipment and welding procedure proposal.

Welding positions:



Welding current:

DC+

Gas flow:

12-18 l/min.

According to WPS

Typical chemical composition of welding wire:

C	Si	Mn	P	S	Cr	Ni	Mo	N	
Max 0.020	0.30	0.40	Max 0.020	Max 0.015	25.0	9.5	4.0	0.21	

Shielding gas:

Shielding gas : Ar, Ar + O₂, Ar+CO₂, (Ar+He+O₂)

Backing gas : Pure N₂ or Ar+N₂ mix

Typical mechanical properties of all-weld-metal:

Yield and Tensile Strengths			Charpy Impact Test	
Yield Mpa(Rp0.2)	Tensile Mpa(Rm)	Elongation %	Charpy V (J) -20 °C	Charpy V (J) -40 °C
650	850	25	135	110

Guidance - Ampere (DC+):

Electrode diameter	1.0 mm	1.2 mm	
Ampere / Volt	140-220A/23-28V	180-260A/24-29V	

Packaging information:

0.8mm x 5kg D200
0.8mm x 15kg D300
1.0mm x 15kg D300
1.2mm x 15kg D300

Approvals:

CE, DNV, TÜV,

Reference / date:

NST MIG Super Duplex 2594,
English, 31.11.2012

Perfect Welding

www.nst.no