

AI-02507

Specifications

AWS/ASME SFA-5.4 : E2594-16

ISO 3581 E2594 NLR

Description and Applications

AI-02507 is a covered electrode with rutile-basic coating and about 105% metal recovery used for welding of super-duplex (austenitic-ferritic) stainless steels of UNS S32750/S32760 type (e.g. Sandvik SAF 2507 and Zeron* 100). The weld metal has especially good properties under severely corrosive conditions. Examples of properties are: Excellent stress corrosion cracking resistance in chloride-containing media Excellent pitting resistance High resistance to general corrosion High resistance to erosion corrosion and corrosion fatigue Spray transfer gives a bead with a finely rippled surface. There is little spatter and very good slag removal. The electrode has excellent arc stability and fast burn off rate with minimal stub loss. It is also characterized by improved moisture resistance, self-peeling slag, high resistance to porosity and easy post weld finishing.

Applications for welding:

- High alloy austenitic-ferritic stainless steels such as Sandvik SAF 2507, UNS S32750 (wrought) and UNS J93404 (cast) and other super-duplex steels.
- 25% chromium duplex stainless steels with PRE values between 37 and 40
- Dissimilar joints between duplex and carbon and low-alloy steels
- Sandvik SAF 2205 and corresponding duplex steels where the highest corrosion resistance is required

Typical Weldmetal Analysis

C	Si	Mn	Cr	Ni	Mo	N	Fe
0.03	0.50	0.70	25.0	9.5	4.0	0.25	Bal

Mechanical Properties of Weldmetal

Temperature	°C (°F)	20 (68)	-40 (-40)
Yield strength, RPO.2	MPa (ksi)	640 (93)	
Tensile strength, Rm	MPa (ksi)	840 (122)	
Elongation, A	%	25	
Hardness	HV10	298	
Impact strength (KV)	J (ft lb)	50 (37)	35 (26)



Welding Parameters

Diameter (mm)	Current type	Amps
2.5	DC /AC	40-75
3.2	DC /AC	70-120
4.0	DC /AC	110-180

Welding Positions

(1G, 1F) Downhand/flat position, (2F) Horizontal position, (2G) Horizontal vertical position, (4G) Overhead position, (3G, 3F, 5G up) Vertical Position Up

Disclaimer

All figures in this datasheet should be considered indicative only. No guarantee is made as to their accuracy.

All figures subject to change without notice. Batch analysis is available for all products sold. Should you require any further information, please contact us at sales@alloysint.com.au

