307Si

Comparable specifications

ASME SFA A 5.9: ~ER307
EN ISO 14343-A: ~18 8 Mn
Werkstoff Nr.: ~1.4370

Description and applications*

* *Illustrative, not-exhaustive list*

Austenitic stainless steel filler metal with a significant amount of manganese, making the all-weld metal in most cases fully austenitic. It gives weld metal with high mechanical strength and excellent crack resistance.
It is a non-magnetic metal, with high ductility, high corrosion resistance and very low ferrite content.

This grade may be used for:

- welding of heterogeneous stainless steels;
- joining and surfacing applications on heat resistant Cr-steel and austenitic steels;
- joining unalloyed/low-alloyed or Cr-steel to austenitic steel
- applications where a good resistance to atmosphere and to corrosive media (e.g. automotive industry) is needed;
- usage as a buffer layer prior to cladding.

Weldable base materials*

* *Illustrative, not-exhaustive list*

High carbon / high manganese steels

All-weld metal mech. properties*

* *For reference only values*

Tensile strength (Rm): ≥ 500 N/mm^2
Yield Strength ($Rp_{0.2}$): ≥ 350 N/mm^2
Elongation: ≥ 25%
Charpy-V Impact (R.T.): ≥ 50 J

Chemical composition*

* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
max	5.00	0.65	max	max	7.00	17.00	max	max
0.20	8.00	1.50	0.030	0.030	10.00	20.00	0.50	0.50

Lot classification

Class S3 acc. to EN ISO 14344.