

309LSi

Comparable specifications

ASME SFA A 5.9: ER309LSi

EN ISO 14343-A: 23 12 L Si

Werkstoff Nr.: 1.4332

Description and applications*

* *Illustrative, not-exhaustive list*

Austenitic stainless steel filler wire with a low carbon content, which reduces the possibilities of intergranular carbide precipitation, while increasing the resistance to intergranular corrosion without the use of stabilizers such as niobium or titanium. The high silicon content improves the usability of the filler metal in the gas metal arc welding process.

Good performance under carburizing atmospheres. High temperature oxidation and corrosion resistance. High ferrite level.

This grade may be used for:

- joining and overlay of stainless steels of similar composition, such as AISI 309 castings, and for joining of 3Cr12;
- usage in contact with fused salts and in some cases of contamination by fuel ashes;
- applications in industrial furnace and boiler parts, annealing chambers, heat exchangers, fused salt treatment installations;
- overlay by submerged arc;
- intermediate layers by submerged arc welding of plates and cast materials with low carbon, stabilised and unstabilised austenitic CrNi coatings.

Weldable base materials*

* *Illustrative, not-exhaustive list*

All 300 series austenitic stainless steel, 3Cr12, mild steels (cladding)

All-weld metal mech. properties*

* *For reference only values*

Tensile strength (R_m): ≥ 510 N/mm²

Yield Strength (R_{p0.2}): ≥ 320 N/mm²

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	1.00	0.65	max	max	12.00	23.00	max	max
0.03	2.50	1.00	0.020	0.030	14.00	25.00	0.50	0.50

Lot classification

Class S3 acc. to EN ISO 14344.

