

## 309

### Comparable specifications

**ASME SFA A 5.9:** ~ER309 (UNS S30980)  
**EN ISO 14343-A:** 22 12 H  
**Werkstoff Nr.:** 1.4829

### Description and applications\*

\* *Illustrative, not-exhaustive list*

Austenitic stainless steel filler metal with a high carbon content, making it suitable for maximum strength, corrosion resistance and applications at higher temperatures. Resistant to scaling up to 1000°C.

Characterized by high creep strength, good resistance to oxidation and good weldability.

This grade may be used for:

welding, joining and surfacing of similar alloys, heat-resistant rolled, forged and cast steels, as well as for welding of heat resistant ferritic Cr-Si-Al steels; welding of dissimilar alloys in wrought or cast form, such as joining Type 304 to carbon steel, welding of the clad side of Type 304 clad steels, applying of stainless steel sheet linings to carbon steel shells; applications in industrial furnaces; applications in the petrochemical industry and the ceramic industry; applications such as high pressure piping and tubing.

### Weldable base materials\*

\* *Illustrative, not-exhaustive list*

All 300 series of austenitic stainless steels (e.g. 1.4713, 1.4724, 1.4742, 1.4762, 1.4828, 1.4832, 1.4878).

### All-weld metal mech. properties\*

\* *For reference only values*

**Tensile strength (Rm):** ≥ 550 N/mm<sup>2</sup>    **Yield Strength (Rp<sub>0.2</sub>):** ≥ 350 N/mm<sup>2</sup>  
**Elongation:** ≥ 25%

### Chemical composition\*

\* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
0.05	1.00	0.90	max	max	11.00	21.00	max	max
0.10	2.00	1.90	0.020	0.030	12.80	23.20	0.50	0.50

### Standard packaging data\*

Welding process	Product type	Ø mm (inches)	Packing type	Weight kg (lbs)	Length mm (inches)
GMAW **	filler wire	0.80 - 1.20 (0.030 - 0.047)	spools BS300 / D300	15 (33)	n.a.
GTAW **	filler rod	1.60 - 4.00 (1/16 - 5/32)	cardboard boxes / tubes	5 (11)	1000 (39.4)
SAW **	filler wire	1.60 - 4.00 (1/16 - 5/32)	basket rims B450	25 (55)	n.a.
SMAW **	core wire for electrodes	1.60 - 5.00 (1/16 - 0.197)	wooden boxes	500 - 750 (1100 - 1650)	250 - 450 (10 - 18)

\* *Other sizes and packing types are available upon request*

\*\* *GMAW: gas metal arc welding; GTAW: gas tungsten arc welding; SAW: submerged arc welding; SMAW: shielded metal arc welding*

### Marking

Each filler rod for GTAW welding is durably marked with an identification traceable to the unique product type. Welding filler materials wound on spools or in coils are durably marked on the coil or spool with an identification traceable to the unique product type.

The outside of each unit package is suitably labelled with at minimum the following data: grade, diameter, heat, lot no., classifications.

Customized labels are available upon request.

### Lot classification

All our productions fulfil the **Class S3** requirements acc. to EN ISO 14344.