

## 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):**  $\geq 500$  N/mm<sup>2</sup>      **Yield Strength (Rp<sub>0.2</sub>):**  $\geq 350$  N/mm<sup>2</sup>  
**Elongation:**  $\geq 25\%$       **Charpy-V Impact (R.T.):**  $\geq 50$  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

### 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)


\* Other sizes and packing types are available upon request

\*\* GMAW: gas metal arc welding; GTAW: gas tungsten 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.

 marking type-testing performed and available.

Customized labels are available upon request.

### Type approvals

**DB** Zulassungs nr. 43.097.09 (GMAW / GTAW)

**TUV Nord** Kennblatt nr. 04032 (GMAW)      **TUV Nord** Kennblatt nr. 04033 (GTAW)

### Lot classification

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