

316AWS

Comparable specifications

ASME SFA A 5.9: ER316L
EN ISO 14343-A: 19 12 3 L
Werkstoff Nr.: 1.4430

Description and applications*

* Illustrative, not-exhaustive list

Austenitic stainless steel filler metal with a low carbon content, which reduces the possibilities of intergranular carbide precipitation, and thereby increases the resistance to intergranular corrosion without the use of stabilizers such as niobium or titanium.

The presence of molybdenum provides creep resistance in a halide atmosphere. It is slightly magnetic.

This grade may be used for:

- welding low-carbon molybdenum-bearing austenitic alloys;
- joining and surfacing of stainless steels of similar composition (CrNi and CrNiMo steels/cast steels);
- joining of all austenitic stainless steels;
- applications as capweld for the clad side of plates having equivalent coating;
- applications for food processing and dairy industry.

Weldable base materials*

* Illustrative, not-exhaustive list

All 300 series austenitic stainless steel, mainly low-carbon molybdenum-bearing

All-weld metal mech. properties*

* For reference only values

Tensile strength (Rm): ≥ 510 N/mm² Yield Strength (Rp_{0.2}): ≥ 320 N/mm²
Elongation: $\geq 25\%$ Charpy-V Impact (R.T.): ≥ 80 J

Chemical composition*

* For reference only values

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
max	1.00	0.30	max	max	11.00	18.00	2.50	max
0.03	2.50	0.65	0.020	0.030	14.00	20.00	3.00	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.


* Other sizes and packing types are available upon request

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

Canadian Welding Bureau Cert. nr. NOV316L (GMAW / GTAW)

ABS Cert. nr. GE2322445-X1 (GMAW / GTAW)

DB Zulassungs nr. 43.097.03 (GMAW / GTAW)

TUV Nord Kennblatt nr. 10239 (GMAW) TUV Nord Kennblatt nr. 10240 (GTAW)

Lot classification

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