TECHNICAL DATA SHEET
STAINLESS STEEL FILLER METAL

310

Comparable specifications

ASME SFA A 5.9: ER310
EN ISO 14343-A: 25 20
Werkstoff Nr.: 1.4842

Description and applications*

* *Illustrative, not-exhaustive list*

Austenitic stainless steel filler metal most often used to weld base metal of similar composition, even if it can be used even for dissimilar welding. It shows excellent resistance to oxidation, especially at high working temperatures (lower than 1000°C) due to its high Cr content, as well as excellent corrosion resistance even when hot.

I^t is fully austenitic and therefore sensitive to hot cracking (it calls for minimal heat input during welding).

This grade may be mainly used for:
- welding and overlay of stainless steels of similar chemical composition;
- dissimilar welding;
- welding of pipe, plate and fittings used in the of industrial furnaces and similar applications working at elevated temperatures (e.g. boiler parts, annealing chambers, heat exchangers, fused salt treatment installations).

Weldable base materials*

* *Illustrative, not-exhaustive list*

300 series austenitic stainless steel for welding (e.g. AISI 310, 304); mild and carbon steels for overlay works.

All-weld metal mech. properties*

* *For reference only values*

Tensile strength (Rm): ≥ 550 N/mm^2 **Yield Strength ($Rp_{0.2}$):** ≥ 350 N/mm^2
Elongation: ≥ 20%

Chemical composition*

* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
0.08	1.00	0.30	max	max	20.00	25.00	max	max
0.15	2.50	0.65	0.020	0.030	22.00	27.00	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)
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.

Type approvals

Canadian Welding Bureau Cert. nr. NOV310 (GMAW / GTAW)

Lot classification

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

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