# 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.

It 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 |

## Lot classification

Class S3 acc. to EN ISO 14344.