

309H

Comparable specifications

ASME SFA A 5.9: ER309
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.

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;
- occasionally, welding of Type 304 and similar base metals where severe corrosion conditions exist requiring higher alloy weld metal;
- 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 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. 1.4828, 1.4833, AISI 309, AISI 304).

All-weld metal mech. properties*

* For reference only values

Tensile strength (Rm): $\geq 550 \text{ N/mm}^2$ Yield Strength (Rp_{0.2}): $\geq 350 \text{ N/mm}^2$
Elongation: $\geq 25\%$

Chemical composition*

* For reference only values

| C | Mn | Si | S | P | Ni | Cr | Mo | Cu |
|------|------|------|-------|-------|-------|-------|------|------|
| 0.04 | 1.00 | 0.30 | max | max | 12.00 | 23.00 | max | max |
| 0.12 | 2.50 | 0.65 | 0.020 | 0.030 | 14.00 | 24.00 | 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. |

* 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.

Customized labels are available upon request.

Type approvals

Canadian Welding Bureau Cert. nr. NOV309H (GMAW / GTAW)

Lot classification

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