

347Si

Comparable specifications

ASME SFA A 5.9: ER347Si
EN ISO 14343-A: 19 9 Nb Si
Werkstoff Nr.: 1.4551

Description and applications*

* *Illustrative, not-exhaustive list*

Austenitic stainless steel filler metal with a significant presence of niobium, that provides resistance to intergranular chromium carbide precipitation and thus increased resistance to intergranular corrosion. The high silicon content improves the usability of the filler metal in the gas metal arc welding process.

Good general corrosion resistance and pitting corrosion resistance.

This grade may be used for:

- welding and overlay of chromium-nickel stainless steel base metals of similar composition stabilized either by Nb or Ti (e.g. types 321 and 347);
- applications at temperatures higher than 400°C;
- applications for the chemical industry, particularly at high temperatures (e.g. equipments intermittently heated within a temperature ranges varying from 450°C to 800°C) a/o for applications such as firewalls and pressure vessels;
- applications for the food processing, dairy, oil and textile industry due to its good corrosion resistance.

Weldable base materials*

* *Illustrative, not-exhaustive list*

All 300 series austenitic stainless steel, particularly 321 and 347 (stabilized).

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: $\geq 25\%$ **Charpy-V Impact (R.T.):** $\geq 50 \text{ J}$

Chemical composition*

* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	Nb
max	1.00	0.65	max	max	9.00	19.00	max	max	10xC
0.08	2.50	1.00	0.020	0.030	11.00	21.00	0.50	0.50	1.00

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

Canadian Welding Bureau Certificate nr. NOV347S (GMAW / GTAW)

DB Zulassungs nr. 43.097.12 (GMAW / GTAW)

TUV Nord Kennblatt nr.04028 (GMAW) **TUV Nord** Kennblatt nr. 04029 (GTAW)

Lot classification

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