

253

Comparable specifications

ASTM: UNS S30815
Material No.: 1.4835
EN designation: X9CrNiSiNce21-11-2

Description and applications*

* Illustrative, not-exhaustive list

This filler wire is designed as an austenitic chromium-nickel steel alloyed with nitrogen and Rare Earth Metals (REM), which include cerium.

Cerium combined with silicon improves the oxidation resistance and erosion-corrosion resistance in oxidizing and neutral environments, whereas the nitrogen allows superior strength at high temperatures. Therefore, this filler wire shows excellent resistance to high temperatures (most suitable temperature range is 850 - 1100 °C), high creep strength, very good resistance to isothermal and, particularly, cyclic oxidation.

Not suitable for applications exposed to wet corrosion.

Prior to welding, it is recommended to carefully brush or ground black plates and previous weld beads.

Weldable base materials*

* Illustrative, not-exhaustive list

1.4835 (Outokumpu 253 MA ®), 1.4818 (Outokumpu 153 MA ®)

All-weld metal mech. properties*

* For reference only (typical) values

Tensile strength (Rm): ~ 680 N/mm² **Yield Strength (Rp_{0.2}):** ~ 440 N/mm²
Elongation: ~ 38% (A₅) **Charpy-V Impact (R.T.):** ~ 130 J

Chemical composition*

* For reference only values

C	Mn	Si	S	P	Ni	Cr	N	Ce
0.05	max	1.40	max	max	10.00	20.00	0.12	0.03
0.12	1.00	2.50	0.015	0.045	12.00	22.00	0.20	0.08

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 / S300	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.

Lot classification

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