

25.9.45

Comparable specifications

ASTM A 240, A 276, A 473, A479, A 790: UNS S32760

Werkstoff Nr.: 1.4501

Description and applications*

* Illustrative, not-exhaustive list

Austenitic-ferritic duplex stainless steel filler metal characterized by a PREN (Pitting Resistance Equivalent Number) at least 40, thereby allowing the weld metal to be called a "superduplex stainless steel".

It provides excellent resistance to aggressive environments as well as to pitting and crevice corrosion in warm seawater, and to caustic alkalis and phosphoric acid. The presence of Cu and W provides superior resistance to sulphuric and hydrochloric acids when compared to similar alloys without these additions. Improved resistance over austenitic stainless to erosion corrosion and corrosion fatigue.

This grade may be used for:

- welding, joining and surfacing of all duplex and superduplex stainless steels when the highest possible corrosion resistance is required;
- dissimilar welds between other stainless and mild or low alloyed steels;
- joining of supermartensitic stainless steels;
- applications in oil and gas industry, particularly for seawater systems (e.g. risers, manifolds, pressure vessels, valves, heat exchangers);
- applications for the pollution control, such as flue gas desulphurization equipments;
- applications in the pulp and paper industry and in the power industry;
- applications in the chemical and pharmaceutical industry.

Weldable base materials*

* Illustrative, not-exhaustive list

UNS S32530, S32550, S32750, S32760, 1.4501

All-weld metal mech. properties*

* For reference only values

Tensile strength (Rm): ≥ 750 N/mm² Yield Strength (Rp_{0.2}): ≥ 550 N/mm²
Elongation: $\geq 25\%$

Chemical composition*

* For reference only values

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N	W
max	max	max	max	max	6.00	24.00	2.50	0.50	0.20	0.50
0.03	1.00	1.00	0.020	0.035	9.50	27.00	4.00	1.50	0.30	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)
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.

 marking type-testing performed and available.

Customized labels are available upon request.

Lot classification

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