

TECHNICAL DATA SHEET

ALUMINUM ALLOY FILLER METAL



2594

Comparable specifications

ASME SFA A 5.9: ER2594
EN ISO 14343-A: 25 9 4 N L
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 intergranular corrosion, pitting and stress corrosion cracking in chloride environment. Very high mechanical strength.

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;
- welding of carbon and low alloy steels to duplex stainless steels;
- welding standard duplex stainless steels such as W.Nr.1.4462 especially for roots runs in pipe;
- applications in petrochemical and offshore industry, e.g. plates and pipeworks;
- applications where outstanding resistance to highly corrosive media under oxidizing and reducing conditions is required;
- applications where high resistance to erosion corrosion and corrosion fatigue is required;
- applications in the pulp and paper industry, and for the production of pollution control equipments for environmental protection.

Weldable base materials*

* *Illustrative, not-exhaustive list*

UNS S32750, S32760, J93380, J93404, S32550, J93370, J93372

All-weld metal mech. properties*

* *For reference only values*

Tensile strength (Rm): ≥ 620 N/mm² **Yield Strength (Rp_{0.2}):** ≥ 550 N/mm²
Elongation: ≥ 18% **Charpy-V Impact (R.T.):** ≥ 50 J

Chemical composition*

* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	N
max	max	max	max	max	8.00	24.00	2.50	max	0.20
0.03	2.00	1.00	0.020	0.030	10.50	27.00	4.50	1.50	0.30

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.