Technical Data Sheet
Aluminum Alloy Filler Metal

PM NORWAY A/S

16.8.2

Comparable specifications

ASME SFA A 5.9 / AWS A5.9: ER16-8-2 (UNS S16880)
EN ISO 14343-A: ~ 16 8 2

Description and applications*

* *Illustrative, not-exhaustive list*

Filler metal of this classification is used primarily for welding stainless steel such as Types 16-8-2, 308H, 316H, 321 and 347 with carbon content ranging from 0.04% to 0.10% for high pressure, high temperature piping systems.

Not generally used for corrosion resisting applications, but for high temperature applications where good thermal embrittlement resistance and creep strength are required. The weld deposit - usually characterized by Ferrite Number not higher than 5 FN - shows good hot-ductility properties, which allow greater freedom from weld or crater cracking even under restraint conditions.

The weld metal is usable in either the as-welded condition or solution-treated condition. Typical service temperature up to ~800°C. This filler metal is also able to provide cryogenic toughness properties down to-196°C.

Mainly used for applications such as:
- catalytic crackers;
- steam piping;
- furnace parts;
- gas and steam turbines;
- petrochemical;
- chemical processing;
- power generation industries.

Weldable base materials*

* *Illustrative, not-exhaustive list*

High carbon (≥ 0.04%) austenitic stainless steels, such as: 304H, 308H, 316H, 321, 347.

All-weld metal mech. properties*

* *For reference only values*

Tensile strength (Rm): ≥ 510 N/mm^2 **Yield Strength ($Rp_{0.2}$):** ≥ 320 N/mm^2
Elongation: ≥ 25%

Chemical composition*

* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu
0.04	1.00	0.30	max	max	7.50	14.50	1.00	max
0.08	2.00	0.65	0.030	0.030	9.50	16.50	2.00	0.75

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.

Lot classification

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

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