Technical Data Sheet
Aluminum Alloy Filler Metal

PM NORWAY A/S

309LNB

Comparable specifications

AWS A5.9: ER309LNb
EN ISO 14343-A: 23 12 Nb
Werkstoff Nr.: ~1.4556

Description and applications*

* *Illustrative, not-exhaustive list*

Stainless steel with nominal composition 23Cr, 12Ni, 0.5Nb: it is a niobium-stabilized overalloyed filler metal suitable for overlay welding of carbon and low-alloy steels, where a type 347 of overlay is required.

The all-weld metal microstructure is normally austenite with a small amount of ferrite. It is used for gas shielded and submerged arc-welding. Characterized by smooth drop transfer and stable arc with no spatter losses. Corrosion resistance similar to type 347, it also shows high resistance against moisture pick up.

Mainly used for:
cladding of carbon steel to achieve a first layer composition similar to that of undiluted 347 stainless steel;
cladding mild and low alloyed steels in offshore a/o chemical plants in case AISI 347 or AISI 321 are required as clad layer.

Weldable base materials*

* *Illustrative, not-exhaustive list*

Steel cladding when chemistry of AISI 347 or AISI 321 is required for the first layer. Overlay welding of 2 .25Cr-1Mo steels.

All-weld metal mech. properties*

* *For reference only values*

Tensile strength (Rm): ≥ 550 N/mm^2 **Yield Strength ($Rp_{0.2}$):** ≥ 350 N/mm^2
Elongation: ≥ 25%

Chemical composition*

* *For reference only values*

C	Mn	Si	S	P	Ni	Cr	Mo	Cu	Nb
max	1.00	max	max	max	12.00	23.00	max	max	10xC
0.03	2.50	0.65	0.02	0.03	14.00	25.00	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.
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; 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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