

Technical data sheet

011121MBA

Stainless steel filler metal – Solid wire**WA TSS/MSS 316L****CLASSIFICATION**

ASME IIC SFA 5.9 / AWS A 5.9:	ER316L
EN ISO 14343-A:	W 19 12 3 L / G 19 12 3 L
EN ISO 14343-B:	SS316L
Equivalent material number:	1.4430
UNS Number:	S31683
ASME IX Qualification	QW432 F-N° 6 QW442 A-N° 8

DESCRIPTION

- GTAW rod / GMAW stainless steel solid wire
- 19% chromium - 12% nickel - 3% molybdenum - low carbon deposit

APPLICATIONS

WA TSS/MSS 316L are suitable for welding stainless steels with an alloy content between 16 to 21% Cr, 6 to 13% Ni and up to 3% Mo, stabilised and unstabilised types

Examples:

AISI	UNS	Material number	EN Symbol
316	S31600	1.4401	X5 CrNiMo 17-12-2
316L	S31603	1.4404	X2 CrNiMo 17-13-2
316LN	S31653	1.4406	X2 CrNiMoN 17-12-2
316Ti	S31635	1.4571	X6 CrNiMoTi 17-12-2
318	S31640	1.4583	X10CrNiMoNb 18-12

TYPICAL WIRE ANALYSIS (weight %)

C	Mn	Si	Cr	Ni	Mo	S	P
0.010	1.70	0.5	19	12	2.8	0.008	0.020

Typical ferrite level: 8 FN

MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES (GMAW)

Rm [MPa]	Rp0.2% [MPa]	A ₅ [%]	CVN [J]
510	320	30	-196°C: 27

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES (GMAW)

Rm [MPa]	Rp0.2% [MPa]	A ₅ [%]	CVN [J]
600	460	35	-196°C: 35

SHIELDING GAS – OPERATING CONDITIONS – WELDING POSITIONS

GTAW		GMAW	
Shielding gas according to EN ISO 14175	Welding positions Current type	Shielding gas according to EN ISO 14175	Welding positions Current type
I1 (100 % argon)		M12 mixed gas (Ar + 0.5-2.5% CO ₂) M13 mixed gas (Ar + 0.5-3% O ₂)	

PACKAGING

Spools	Ø mm	0.8	1.0	1.2	1.6
Rods	Ø x1000 mm	1.6	2.0	2.4	3.2

Other diameters are available on request

Welding products and techniques evolve constantly. All descriptions, illustrations and properties given in this data sheet are subject to change without notice and can only be considered as suitable for general guidance. This document is intended to help the user make the correct choice of product. It is his responsibility to assess its suitability for his intended application.