

**Technical data sheet**

011121MBA

Cored welding wire

**TUBE S 309L-G****CLASSIFICATION**

ASME IIC SFA 5.22 / AWS A 5.22:	EC309L
ASME IIC SFA 5.9 / AWS A 5.9:	EC309L
EN ISO 17633-A:	T 23 12 L M M12 1
EN ISO 17633-B:	TS 309L M M12 1

**DESCRIPTION**

- Metal cored stainless steel wire for gas shielded arc welding
- 23% chromium - 12% nickel - low carbon deposit
- Combines the quality of SMAW with the productivity of GMAW
- Excellent weld metal quality and X-ray soundness

**APPLICATIONS**

TUBE S 309L-G is suitable for cladding carbon and low alloy steels and produces a niobium stabilized first layer on such claddings.

Dissimilar welds between stainless steels type 304, 304L, 316, 316L, 318, 316Ti, 321, 410 or ferritic stainless steels type 1.4713, 1.4724, 1.4742, 3Cr12, to non or low alloyed CMn steels, for service temperatures up to 400°C.

ISO/TR 15608: Groups 1, 2, 3 and 4 to groups 7, 8 and 10.  
Group 7 to groups 8 and 10.

**TYPICAL ALL-WELD METAL ANALYSIS**

C	Mn	Si	Cr	Ni	S	P
0.02	1.40	0.60	24.0	13.0	0.008	0.015

Typical ferrite level: 20 FN

**MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES**

Rm [MPa]	Rp0.2% [MPa]	A <sub>5</sub> [%]	CVN [J]
520	320	25	+ 20°C: 40

**TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES**

Rm [MPa]	Rp0.2% [MPa]	A <sub>5</sub> [%]	CVN [J]
580	470	35	+ 20°C: 65

**SHIELDING GAS**

EN ISO 14175:	M12	Ar + 0.5 % < CO <sub>2</sub> ≤ 2.5 with or without helium
	Z	Ar + CO <sub>2</sub> ≤ 0.5 % or O <sub>2</sub> ≤ 0.5 % with or without helium
	I1	Ar
	M13	Ar + 0.5 % < O <sub>2</sub> ≤ 3.0 with or without helium

**OPERATING CONDITIONS**

Current type	Gas flow rate [l/min]	Stick out [mm]	Recovery
DC+ / pulsed	10 - 20	12 - 25	98 %

**WELDING POSITIONS**

TUBE S 309L-G is primarily used in the flat and horizontal positions. However, welds in other positions are also possible using the short-circuiting or pulsed arc modes of transfer.

**PACKAGING**

Diameter	1.2 mm		1.6 mm
	EN ISO 544 – ASME IIC SFA-5.2 M		
Spool type	S200	BS300	BS300
Weight	5 kg	15 kg	15 kg

Other packaging and other diameters: please consult us

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.