

Technical data sheet

011121MBA

Cored welding wire**TETRA S 309LMo-G****CLASSIFICATION**

ASME IIC SFA 5.22 / AWS A 5.22:	E309LMoT0-4 - E309LMoT0-1
EN ISO 17633-A:	T 23 12 2 L R M21 3 - T 23 12 2 L R C1 3
EN ISO 17633-B:	TS309LMo-F M21 0 / TS309LMo-F C1 0
Equivalent Material number:	1.4459
ASME IX Qualification	QW432 F-N° 6 QW442 A-N° 8

DESCRIPTION

- Rutile flux cored stainless steel wire for gas shielded arc welding
- 24% chromium - 13% nickel - 3% molybdenum - low carbon deposit
- Exceptional resistance to moisture pick-up
- Attractive bead appearance, automatic slag release, very good penetration and high productivity
- Excellent X-ray soundness
- Maximum performance in the flat and horizontal positions
- Welded with classical economic Ar-CO₂ mixtures or CO₂

APPLICATIONS

- Welding stainless steels of similar composition or ferritic stainless steels.
- Joining stainless steels to mild and low-alloyed steels.
- Rebuilding and buffering before cladding or hardfacing.
- Maintenance on "hard-to-weld" steels.

Examples

Dissimilar welds between CrNiMo stainless steels and mild or low alloyed CMn steels, for service temperatures up to 350°C.

TETRA S 309LMo-G has superior resistance to dilution when compared to 309L deposits because of its higher alloy and ferrite content. Compared to the AWS 312 weldments it benefits from an improved strength/ductility balance.

TYPICAL ALL-WELD METAL ANALYSIS

C	Mn	Si	Cr	Ni	Mo	S	P
0.03	1.40	0.80	23.5	12.5	2.80	0.008	0.020

Typical ferrite level: 30 FN

MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES

Rm [MPa]	Rp0.2% [MPa]	A ₅ [%]	CVN [J]
550	350	25	+20°C: 40

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES

Rm [MPa]	Rp0.2% [MPa]	A ₅ [%]	CVN [J]
760	610	27	+20°C: 50

SHIELDING GAS

M21 (Ar + 15 - 25% CO₂), M20 (Ar + 5% < CO₂ ≤ 15%) gas mixtures, or C1 (CO₂) according to EN ISO 14175

OPERATING CONDITIONS

Diameter [mm]	Current type	Current [A]	Voltage [V]	Stick-out [mm]	Gas flow rate
1.2	DC+	100 - 280	23 - 33	10 - 25	12 - 20 l/min.
1.6	DC+	150 - 400	23 - 35	10 - 25	12 - 20 l/min.

WELDING POSITIONS

Flat, Horizontal

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.