

Technical data sheet

011121MBA

Cored welding wire

TETRA S 312-G**CLASSIFICATION**

ASME IIC SFA 5.22 / AWS A 5.22:	E312T0-4 - E312T0-1
EN ISO 17633-A:	T 29 9 R M21 3 - T 29 9 R C1 3
EN ISO 17633-B:	TS312-F M21 0 - TS312-F C1 0
Equivalent Material number:	1.4337
ASME IX Qualification	QW432 F-N° 6 QW442 A-N° 8

DESCRIPTION

- Rutile flux cored stainless steel wire for gas shielded arc welding
- 29% chromium - 9% nickel deposit
- Attractive bead appearance, easy 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

Its high alloy content and high ferrite ratio give TETRA S 312-G extreme tolerance to hot cracking and to dilution with a wide range of base materials. Preheat can often be avoided or minimised. The weld deposit work hardens and gives good wear and friction resistance.

Examples:

- Welding stainless steels of similar composition or ferritic stainless steels.
- Joining stainless steels to mild and low-alloyed steels.
- Buffer layers before hardfacing.
- Maintenance on "hard-to-weld" steels.
- Welding high carbon hardenable steels, of known or unknown composition and most steels subject to cracking such as tool steels, manganese steels, spring steels and high-speed steels.

TYPICAL ALL-WELD METAL ANALYSIS

C	Mn	Si	Cr	Ni	Mo	S	P
0.10	1.30	0.80	29.0	8.60	0.30	0.008	0.020

Typical ferrite level: 50 FN

MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES

Rm [MPa]	Rp0.2% [MPa]	A ₅ [%]	CVN [J]
660	450	15*	+20°C: 32

*22 % elongation on A₄ as required by AWS is not obtained on all fabrications.

TYPICAL ALL-WELD METAL MECHANICAL PROPERTIES

Rm [MPa]	Rp0.2% [MPa]	A ₅ [%]	CVN [J]
860	650	22	+20°C: 40

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
1.2	DC+	100 - 270	23 - 35	12 - 25	10 - 20 l/min.
1.6	DC+	150 - 400	23 - 37	12 - 25	10 - 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.