

**Technical  
data sheet**

011121MBA

**Cored welding wire  
TRI S 312-O****CLASSIFICATION**

EN ISO 17633-A:	T 29 9 U NO 3
ASME IIC SFA 5.22 / AWS A 5.22:	E312T0-3
EN ISO 17633-B:	TS312-F NO 0
Equivalent Material number :	1.4337
ASME IX Qualification	QW432 F-N° 6 QW442 A-N° 8

**DESCRIPTION**

- Special flux cored self-shielded stainless steel wire for open arc welding
- 29% chromium - 9% nickel deposit
- Austenitic type deposit with high delta ferrite content
- Sound deposits are obtained even in the presence of cross draughts
- Primary choice for repairing and rebuilding application
- Provides maximum productivity for outdoor jobs
- The weld deposit workhardens and gives good wear and friction resistance

**APPLICATIONS**

The TRI S series of wires is designed for on-site weld surfacing, repair and assembly of stainless steels. Good quality welds may be obtained, even when they are used in difficult weather conditions. Its high alloy content and high ferrite ratio allow TRI S 312-O to benefit from extreme tolerance to hot cracking and to dilution with a wide range of base materials. Preheat can often be avoided or minimised.

**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 generally most of 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
0.03	1.30	0.80	29.0	9.50	0.40	0.008	0.020

Typical ferrite level: 40 FN

**MINIMUM ALL-WELD METAL MECHANICAL PROPERTIES**

Rm [MPa]	Rp0.2% [MPa]	As [%]	CVN [J]
660	450	15*	-

\*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]	As [%]	CVN [J]
800	670	22	+ 20°C: 35

**SHIELDING GAS**

None

**OPERATING CONDITIONS**

Current type	Gas flow rate	Stick out	Recovery
DC+	-	25 - 45 mm	88 %

**WELDING POSITIONS**

Flat, half up, half down

**PACKAGING**

Diameter	1.6 mm	2.0 mm	2.4 mm
Spool type	EN ISO 544: BS300		
Weight	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.