

## ERTi-12

**CATEGORY** GMAW-GTAW Solid wires

**TYPE** Solid drawn Titanium Grade 12 welding wire .

**APPLICATIONS** This alloy finds his applications in chemical industry and offers excellent Weldability. Often recommended for pressure vessels and piping for its superior strength alone.

**PROPERTIES** **ER Ti-12.** Grade 12 (Ti 0.8Ni0.3Mo) is an intermediate strength grade originally developed to provide enhanced crevice-corrosion resistance in high temperature brines, but at lower cost than Grade 7. The improved performance is believed to be the result of Ni++ and Mo++ ions that alter the surface electrochemistry of the material in the crevice or under a surface deposit. Grade 12 has better elevated temperature properties than Grade 2 or 3 and is sometimes specified for pressure vessels or piping for its superior strength alone.

**CLASSIFICATION**

AWS	A 5.16: ER Ti 12 UNS: R53401
EN ISO	24034: STI-3401
DIN: W.Nr.	3.7105
DIN	1737:

**SUITABLE FOR** Titanium grade 12, Grade 7, Grade 2 and Grade 3

**APPROVALS** CE approved

**WELDING POSITIONS:**



**ALL WELD METAL WEIGHT %**

C	O	N	H	Fe	Al	V	Pd	Mo	Ni
<0.03	0.08-0.16	<0.015	<0.008	<0.15				0.2-0.4	0.6-0.9

**MECHANICAL PROPERTIES**

Heat Treatment	R <sub>p0,2</sub> (N/mm <sup>2</sup> )	R <sub>m</sub> (N/mm <sup>2</sup> )	A <sub>5</sub> (%)	Impact Energy (J) ISO-V			Hardness HRc / HV
				-20°C	-40°C	-60°C	
as welded	345	483					

**WELDING PARAMETERS / PACKING**

D (mm)	Welding Parameters		Current (A)	Packing kg / tube
	Length (mm)			
1,2	1000			5
1.6	1000			5
2.0	1000			5
2.4	1000			5

**REDRYING TEMPERATURE** not required

**NOTE** Also available as spooled wire :0.8 mm, 1.0 mm and 1.2 mm (D-100 / D-200 / D-300)