



Manufacturers of Custom Welding Lines for Resale
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SELECTRODE 6213 Titanium Tig

INTERNATIONAL CLASSIFICATIONS

AWS/ASME A5.16 ERTi-2
DIN 1737: SG Ti 2

EN ISO: 24034: S Ti 0120 (Ti99.6)

FEATURES & APPLICATIONS

6213 is a TIG filler metal used for welding commercial pure titanium alloys commonly found in applications requiring high temperature resistance and resistance to chemical reagents. Although there are four grades of Commercial Pure Titanium filler metals, C.P. Grade 2 (ERTi-2) is the most popular because of its good balance of strength, formability and weldability. The most common applications of ERTi-2 are the aircraft industry, where tensile strength and weight ratios are very critical. Other uses would include cryogenic and petrochemical applications such as chemical process heat exchangers, pressure vessels and piping systems, pulp bleaching systems, electrochemical and chemical storage tanks.

ALL WELD METAL ANALYSIS (TYPICAL WEIGHT %)

C	O	N	H	Fe	Ti
0.008	0.08	0.009	0.002	0.028	Bal.

TYPICAL MECHANICAL PROPERTIES

Undiluted Weld Metal	Maximum Value Up to:
Tensile Strength	50,000 PSI (245 MPa)
Yield Strength	40,000 PSI (376MPa)
Elongation	20%

WELDING CURRENT & INSTRUCTIONS

Recommended Current: DC- (100% Argon gas should be used to minimize burn-off of the tungsten electrode)

Welding Techniques: Welding titanium requires extreme cleanness—the base metal, filler metal, and welding environment must be immaculate. Contamination by natural body oils, oils from the forming and drawing process, shop dust, paint, dirt, cutting fluids, and lubricants all can lead to embrittlement and weld failure.

Recommended Amperage Settings:

Diameter Inches (mm)	Volts	Amps
1/16 (1.6)	16-20	100-185
3/32 (2.5)	11-17	150-250
1/8 (3.2)	11-19	200-375