

### FILLER METAL ERTI-1

Specifications: AWS A5.16 ASME SFA 5.16

Classification: ERTI-1

**Description:**

FILLER METAL ERTI-1 is the lowest strength unalloyed, or commercially pure titanium available. It is normally used in applications where ductility is paramount. Applications include explosive cladding, expanded metal, and deep drawing applications. As with all titanium alloys, FILLER METAL ERTI-1 is extremely reactive above 1000F and extra precaution must be taken to have a successful weld. FILLER METAL ERTI-1 can be welded by the GTAW, GMAW and plasma arc processes.

Typical Chemistry Analysis					
C	O	N	H	Fe	Ai
0.03 max	0.03-0.10	0.012 max	0.005 max	0.08 max	Rem

**Typical Mechanical Properties**

Tensile Strength	35,000 psi
Yield Strength	25,000 psi
Elongation in 2"	24 %

### FILLER METAL ERTI-2

Specifications: AWS A5.16 ASME SFA 5.16

Classification: ERTI-2

**Description:**

FILLER METAL ERTI-2 is the "workhorse" of titaniums in the commercially pure titaniums available. It is normally used in applications such as pressure vessels, pipes, columns, tanks, shafts, valves, and fittings. As with all titanium alloys, FILLER METAL ERTI-2 is extremely reactive above 1000°F and extra precaution must be taken to have a successful weld. FILLER METAL ERTI-2 can be welded by the GTAW, GMAW and plasma arc processes.

Typical Chemistry Analysis					
C	O	N	H	Fe	Ai
0.03 max	0.08-0.16	0.015 max	0.008 max	0.12 max	Rem

**Typical Mechanical Properties**

Tensile Strength	50,000 psi
Yield Strength	40,000 psi
Elongation in 2"	20 %

### FILLER METAL ERTI-5(Ti 6Al-4V)

Specifications: AWS A5.16 ASME SFA 5.16

Classification: ERTI-5

**Description:**

FILLER METAL ERTI-5 (Ti 6Al-4V) is also known as 6-4 titanium. It is the most common and widely used titanium alloy due to its relatively low cost and easy availability. Weldability is good and it can be heat treated to a higher strength or toughness. FILLER METAL ERTI-5 is used in aircraft components such as landing gear, wing spars, and compressor blades. Corrosion resistance is comparable to the FILLER METAL ERTI-2. It can be welded by the GTAW, GMAW and plasma arc processes.

Typical Chemistry Analysis					
C	O	N	H	Fe	Ai
0.05 max	0.12-0.20	0.03-0.015 max	0.015 max	0.22 max	5.5-6.75
V	Ti				
3.5-4.5	Rem				

**Typical Mechanical Properties**

Tensile Strength	130,000 psi
Yield Strength	120,000 psi
Elongation in 2"	10 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.

## FILLER METAL ERTi-7

Specifications: AWS A5.16 ASME SFA 5.16

Classification: ERTi-7

### Description:

FILLER METAL ERTi-7 has the same mechanical properties as the ERTi-2 but has the addition of palladium. This improves corrosion performance under mildly reducing conditions or where crevice or under-deposit corrosion is a problem. For this reason FILLER METAL ERTi-7 can be considered for welding grade 2 or grade 16 titanium where improved corrosion performance is desired. It can be welded by the GTAW, GMAW and plasma arc processes.

Typical Chemistry Analysis					
C	O	N	H	Fe	Ai
0.03 max	0.08-0.16	0.015 max	0.008 max	0.12 max	-
Pd	Ti				
0.12-0.25	Rem				

Typical Mechanical Properties	
Tensile Strength	50,000 psi
Yield Strength	40,000 psi
Elongation in 2"	20 %

## FILLER METAL ERTi-12

Specifications: AWS A5.16 ASME SFA 5.16

Classification: ERTi-12

### Description:

FILLER METAL ERTi-12 is an intermediate strength grade of titanium originally developed to provide enhanced crevice corrosion resistance in high temperature brines but at a lower cost than the ERTi-7. FILLER METAL ERTi-12 has better elevated temperature than ERT i-2 and is sometimes specified for pressure vessels or piping for its superior strength alone. It can be welded by the GTAW, GMAW and plasma arc processes.

Typical Chemistry Analysis					
C	O	N	H	Fe	Ni
0.03 max	0.08-0.16	0.015 max	0.008 max	0.15 max	0.06-0.09
Mo	Ti				
0.2-0.4	Rem				

Typical Mechanical Properties	
Tensile Strength	70,000 psi
Yield Strength	50,000 psi
Elongation in 2"	12 %

Data contained in this catalog are typical of the products described, but are not suitable for specifications.