UNS Number:R50400General Information:Titanium Alloy Grade 2 is "unalloyed" titanium offering an excellent balance of strength and ductility. The material has good toughness and is readily weldable. This material is very corrosion resistant in highly oxidizing and mildly reducing environments. The material is castable and is often utilized in cast valves and fittings. In plate form, the alloy is also used explosively boned to make clad plate. The alloy is available as castings, wire, welded tube, pipe, plate, sheet, strip, forgings, bar, and billet.Common Specifications:Specification: Product Form: AMS 4902 AMS 4941 AMS 4942 Seamless Tubing AMS 4942 Seamless Tubing AMS 4951 AMS 4961 AMS	Common Name:	CP Grade 2 Titanium Grade 2		
of strength and ductility. The material has good toughness and is readily weldable. This material is very corrosion resistant in highly oxidizing and mildly reducing environments. The material is castable and is often utilized in cast valves and fittings. In plate form, the alloy is also used explosively 	UNS Number:	R50400		
AMS 4902Strip, Sheet, and PlateAMS 4941Welded TubingAMS 4942Seamless TubingAMS 4951Wire, WeldingASME SB265Sheet, Strip, and PlateASME SB348Bar and BilletASME SB367CastingASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B363FittingsASTM B361Seamless PipeASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM B831ForgingsASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire	General Information:	of strength and ductility. The material has good toughness and is readily weldable. This material is very corrosion resistant in highly oxidizing and mildly reducing environments. The material is castable and is often utilized in cast valves and fittings. In plate form, the alloy is also used explosively boned to make clad plate. The alloy is available as castings, wire, welded		
AMS 4941Welded TubingAMS 4942Seamless TubingAMS 4951Wire, WeldingASME SB265Sheet, Strip, and PlateASME SB348Bar and BilletASME SB367CastingASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B363FittingsASTM B361Seamless PipeASTM B861Seamless PipeASTM B863WireASTM B863WireASTM B863WireASTM B831ForgingsASTM B863WireASTM B863WireASTM B864Seamless PipeASTM B865WireASTM B861Seamless PipeASTM B863WireASTM B864WireASTM B865WireASTM B865Wire	<b>Common Specifications:</b>	Specification:	Product Form:	
AMS 4942Seamless TubingAMS 4951Wire, WeldingASME SB265Sheet, Strip, and PlateASME SB348Bar and BilletASME SB367CastingASME SB381ForgingsASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B38Tube, Seamless and WeldedASTM B363FittingsASTM B361Seamless PipeASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B863WireASTM B861ForgingsASTM B862Welded PipeASTM B863WireASTM B861ForgingsASTM B862Welded PipeASTM B863WireASTM B863WireASTM B863WireASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		AMS 4902	Strip, Sheet, and Plate	
AMS 4951Wire, WeldingASME SB265Sheet, Strip, and PlateASME SB348Bar and BilletASME SB367CastingASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B361Seamless PipeASTM B861Seamless PipeASTM B863WireASTM B863WireASTM B863WireASTM B861ForgingsASTM B862Welded PipeASTM B863WireASTM B863WireASTM B863WireASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		AMS 4941	Welded Tubing	
ASME SB265Sheet, Strip, and PlateASME SB348Bar and BilletASME SB367CastingASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B861ForgingsASTM B862Welded PipeASTM B863WireASTM B861ForgingsASTM B863WireASTM B861ForgingsASTM B863WireASTM B863WireASTM B863WireASTM B861ForgingsASTM B863WireASTM B863WireASTM B863WireASTM B863WireASTM B67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		AMS 4942	Seamless Tubing	
ASME SB348Bar and BilletASME SB367CastingASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B863WireASTM B861ForgingsASTM B862Welded PipeASTM B863WireASTM B861ForgingsASTM B863WireASTM B863WireASTM B863WireASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		AMS 4951	Wire, Welding	
ASME SB367CastingASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B863ForgingsASTM B863WireASTM B863WireASTM B863WireASTM B863WireASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASME SB265	Sheet, Strip, and Plate	
ASME SB381ForgingsASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B863ForgingsASTM B863WireASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASME SB348	Bar and Billet	
ASTM B265 (Grade 2)Strip, Sheet, and PlateASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B861ForgingsASTM B862Welded PipeASTM B863WireASTM B863WireASTM B863WireASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASME SB367	Casting	
ASTM B338Tube, Seamless and WeldedASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM B863WireASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASME SB381	Forgings	
ASTM B348 (Grade 2)Bar and BilletASTM B363FittingsASTM B363 (Grade 2)CastingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B265 (Grade 2)	Strip, Sheet, and Plate	
ASTM B363FittingsASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B338	Tube, Seamless and Welded	
ASTM B367 (Grade 2)CastingsASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B348 (Grade 2)	Bar and Billet	
ASTM B381ForgingsASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B363	Fittings	
ASTM B861Seamless PipeASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B367 (Grade 2)	Castings	
ASTM B862Welded PipeASTM B863WireASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B381	Forgings	
ASTM B863WireASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B861	Seamless Pipe	
ASTM B831ForgingsASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B862	Welded Pipe	
ASTM F67 (Grade 2)Unalloyed Titanium for Surgical ImplantsAWS A5.16 ERTi-2Weld Wire		ASTM B863	Wire	
AWS A5.16 ERTi-2 Weld Wire		ASTM B831	Forgings	
		ASTM F67 (Grade 2)	Unalloyed Titanium for Surgical Implants	
ISO 5832-2 (Grade 2)Unalloyed Titanium for Surgical Implants		AWS A5.16 ERTi-2	Weld Wire	
		ISO 5832-2 (Grade 2)	Unalloyed Titanium for Surgical Implants	

Chemistry Requirements: % Maximum unless given as a range.

Ν	С	Н	Fe	0	<b>Residuals Each Max.</b>	Residuals Max. Total	Ti
0.03	0.08	0.015	0.3	0.25	0.1	0.4	Balance

## **Minimum Tensile Properties:**

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA*
As specified (shape)	50 (345)	40 (275)	20	30

## **Typical Tensile Properties:**

Condition	UTS ksi (Mpa)	0.2%YS ksi (MPA)	% El.	% RA
As provided	70 (483)	51 (352)	28	-

Note: Typical properties are not to be utilized as a requirement, but are only listed for guidance. These properties may or may not be attainable in all circumstances.

\* %Ra not required by all specifications

14 Moriarty Road Welshpool Western Australia 6106 • sales@specialtymetals.com.au

## 📞 +61 8 9353 5588 | 🛞 specialtymetals.com.au