

Features

- Exceptional Strength-to-Weight Ratio: It provides approximately 30% higher strength than steel at roughly half the weight.
- AMS 4911 Certification: Guaranteed compliance with SAE International standards for chemical composition and mechanical reliability in the annealed condition.
- Offers a minimum ultimate tensile strength of 895 MPa (130 ksi) and a yield strength of 825 MPa (120 ksi).
- Superior Corrosion Resistance: Naturally forms a stable protective oxide film, making it highly resistant to salt water, marine atmospheres, and various acids.
- While supplied annealed, it can be solution treated and aged to further enhance mechanical properties.

RS PRO Titanium Grade 5 AMS4911 Sheet

L:500MM X W:300MM X T:5MM

RS Stock No: 0851491



RS Professionally Approved Products bring to you professional quality parts across all product categories. Our product range has been tested by engineers and provides a comparable quality to the leading brands without paying a premium price.

Product Description

RS PRO Titanium Grade 5 AMS4911 Sheet
The RS PRO Titanium Grade 5 AMS4911 Sheet is a premium-grade alpha-beta alloy material engineered for environments demanding an elite strength-to-weight ratio and superior durability. Composed of 6% aluminium and 4% vanadium, this "workhorse" titanium alloy meets the rigorous AMS 4911 aerospace standards, ensuring consistent mechanical performance and reliability in the annealed state. It offers exceptional resistance to corrosion, particularly in marine and chemical environments, and maintains its structural integrity at temperatures up to 400°C. These properties, combined with its high fatigue resistance and biocompatibility, make it the ideal choice for critical applications in aerospace structures, medical implants, and high-performance automotive engineering.

- Key Features**
- **High-Temperature Performance:** Maintains effective structural integrity and creep resistance at continuous operating temperatures up to 400°C (750°F).
 - **Excellent Biocompatibility:** Non-toxic and non-magnetic, allowing for direct contact with human tissue and bone, making it ideal for medical implants.
 - **Good Weldability:** Can be readily welded using inert gas shielding (TIG/MIG), as well as spot, seam, and flash welding.
 - **Fatigue & Fracture Toughness:** Engineered for superior fatigue resistance and durability under cyclic loading, which is critical for aerospace structural parts.
 - **Cryogenic Capability:** Remains ductile and tough even at extremely low temperatures, suitable for space and cryogenic applications.

- Applications**
- Aerospace Structural Components
 - Gas Turbine Engine Parts
 - Medical Implants & Prosthetics
 - High-Performance Motorsport
 - Subsea & Marine Engineering

General Specifications

Material	Titanium Alloy (Ti-6Al-4V)
Form	Sheet
Grade	Grade 5 (Alpha-Beta alloy) / AMS 4911
Length	500MM
Width	300MM
Thickness	5MM

Metal Sheets

Mechanical Properties

Tensile Strength	≥895 MPa
Yield Strength (0.2% Offset)	≥825 MPa (min)
Elongation at Break	≥10%
Melting Point	~1,604°C – 1,660°C
Modulus of Elasticity	114 GPa (16.5 x psi)
Electrical Resistivity	1.71 μΩ · m
Magnetic Permeability	1.00005 (Paramagnetic / non-magnetic)

Similar Products

RS Code	Form	Dimensions	Thickness
0851487	Sheet	500MM x 300MM	0.5MM
0851488	Sheet	500MM x 300MM	1MM
0851489	Sheet	500MM x 300MM	2MM
0851490	Sheet	500MM x 300MM	3MM