



INCONEL® 686

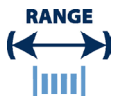
Key Features

This Nickel-Chromium-Molybdenum-Tungsten alloy has exceptional resistance to sulfuric or hydrochloric acids, and to crevice or pitting corrosion in hot acid solutions which out performs Hastelloy C grades in mixed acids. This alloy ideal for marine service having excellent resistance to general, galvanic, and localized corrosion and hydrogen embrittlement in seawater. INCONEL® 686 also has a high operating of up to 1000°C which is ideal for applications such as bolts, nuts and studs in the fasteners industry.

IMPORTANT

We will manufacture to your required mechanical properties.

key advantages to you, our customer



0.025mm to 21mm
(.001" to .827")



Order 3m to 3t
(10ft to 6000Lbs)



Delivery:
within 2 weeks



Wire to your spec



E.M.S available



Technical support

INCONEL® 686 available in:-

- Round wire
- Bars or lengths
- Flat wire
- Profile wire
- Rope/Strand

Packaging

- Coils
- Spools
- Bars or lengths



*Trade name of Special Metals Group of Companies.

INCONEL® 686



Chemical Composition			Specifications	Key Features	Typical Applications
Element	Min %	Max %	ASTM B574 ASTM B575 ASTM B619 ISO 15156-3 (NACE MR0175) Designations UNS N06686 W.Nr. 2.4606 Ni-Cr-Mo-W NiCr21Mo16W	Excellent corrosion resistance in a wide range of corrosive applications such as hot acids and marine environments Higher operating temperatures than most Hastelloy C grades Exceptional resistance to general corrosion including pitting and crevice corrosion	Chemical Processing Petrochemical processing Marine Engineering Acid Processing Oil & Gas extraction Pulp & Paper production Pollution control Waste treatment Welding
Ni	Balance				
Cr	19.0	23.00			
Mo	15.0	17.0			
W	3.0	4.4			
Ti	0.02	0.25			
Fe	-	1.0			
C	-	0.01			
Mn	-	0.75			
S	-	0.02			
Si	-	0.08			
P	-	0.04			

Density	8.73 g/cm ³	0.315 lb/in ³
Melting Point	1338 - 1380 °C	2440 - 2516 °F
Coefficient of Expansion	11.97 gm/m °C (20 - 100 °C)	6.650 x 10 ⁻⁶ in/in °F (70 - 212 °F)
Modulus of Elasticity	207.0 kN/mm ²	30000 ksi

Properties				
Condition	Approx. tensile strength		Approx. operating temperature depending on load** and environment	
	N/mm ²	ksi	°C	°F
Annealed	<1000	<145	Up to 1000	Up to 1832
Spring Temper	1200 – 1600	174 – 232	Up to 1000	Up to 1832

The above tensile strength ranges are typical. If you require different please ask.

** High temperature static applications

**Static applications = still/fixe d/motionless/rigid