

High Strength, High Corrosion Resistant Nickel Alloy Inconel625

Standard

DIN 10095: NiCr22Mo9Nb / 2.4856
 ASTM B443: N06625 (INCO: Inconel625)
 JIS G 9402: NCF625

Chemical Composition (%)

Ni: min. 58	Mn: max. 0.5
Cr: 20-23	Si: max. 0.5
Mo: 8-10	P: max. 0.015
Nb+Ta: 3.15-4.15	Al: max. 0.015
Fe: max. 5.0	S: max. 0.4
Co: max. 1.0	Ti: max. 0.4
C: max. 0.1	

Physical Properties

Density (g/cm ³)	8.44
Electrical Resistivity (μ Ω.cm)	129
Melting Range (°C)	1290-1350
Coefficient of thermal expansion 10 ⁻⁶ /K	12.8
Thermal conductivity W/(m*K)	10.2

*value for the lowest temper class

Applications

Inconel625 is used in aerospace applications as well as marine applications. Common applications for this alloy are springs, seals, bellows for submerged controls, electrical cable connectors, fasteners, flexure devices, and oceanographic instrument components.

Merit

Inconel625 is a nickel-based superalloy that possesses high strength properties and resistance to elevated temperatures. It also demonstrates remarkable protection against corrosion and oxidation. Its ability to withstand high stress and a wide range of temperatures, both in and out of water, as well as being able to resist corrosion while being exposed to highly acidic environments.

Mechanical Properties

Form & Condition	Tensile Strength	Yield Strength	Elongation	Hardness	Bending Test(90 °)	
	Mpa	Mpa	%	Brinell	GW	BW
Annealed	min. 827	min. 414	min. 30	145-240	-	-
Solution Annealed	min. 690	min. 276	min. 30	-	-	-

Physical properties of the above materials are conventional performance indicators. If you have some special requirements, (for example property and tolerance), please contact Kinmachi Company directly, we will give you professional assessments and answers.