

## INCONEL ALLOY 617

# NICKEL ALLOY

HIGH TEMPERATURE RESISTING ALLOY

INCONEL 617 covers nickel alloy forgings. These alloys are classified into different grades according to their chemical composition. Inconel 617 Alloy covers Ni-Cr-Co-Mo alloy UNS N06617. Inconel 617 consists of nickel-chromium-cobalt and molybdenum. These elements make Inconel 617 highly resistant to oxidation and carburization. Inconel 617 can be easily fabricated; it can be hot formed up to 2200° F, and cold formed at 1900° F. Inconel 617 has excellent weldability. Inconel 617 is used for ducting, transition liners in both aircraft and land based gas turbines, and combustion cans. The values stated in inch-pound units are to be regarded as standard. The values given in parentheses are mathematical conversions to SI units that are provided for information only and are not considered standard.

### Chemical Properties

C	Mn	S	Si	Cr	Mo	Ni	Cu	Ti	Al	B	Co	Fe
0.05-0.15	1.0 Max	0.015 Max	1.0 Max	20.0-24.0	8.0-10.0	44.5 Min	0.5 Max	0.6 Max	0.8-1.5	0.006 Max	10.0-15.0	3.0 Max

### Mechanical Properties

Yield strength	Tensile strength	Elongation
Min 0.2% Mpa	Min Mpa	Min %
241	655	35

### Physical Properties

Density	Elastic Modulus	Mean Coefficient of Thermal			Thermal Conductivity		Specific Heat	Electrical Resistivity
(Kg/m <sup>3</sup> )	(Gpa)	Expansion(µm/m/°C)			(W/m.K)		0-100°C	(nΩ.m)
8.3	211	11.6	14.0	16.3	13.4	28.7	419	1.222

### Heat Treatment

Solution Annealed @ 1177°C & Rapidly Liquid Quenched

### Equivalent Designation

UNS N06617  
En Name NiCr23Co12Mo  
W.Nr. 2.4663

CUSTOMER ASSISTANCE : [customer@TorqBolt.com](mailto:customer@TorqBolt.com)

#4/217, Deccan Bank Bldg,  
R. R. Roy Road, Mumbai – 400 004,  
Maharashtra, INDIA

Email: [info@TorqBolt.com](mailto:info@TorqBolt.com)  
Web: [www.TorqBolt.com](http://www.TorqBolt.com)

Copyright 2013 Torqbolt Inc.