

NI-BASE ALLOYS

Available Product Shapes

[Long Products](#)
[Open Die Forgings](#)

Product Description

Components for aircraft industry and gas turbines, e.g. shafts, blades and discs.

Properties

Precipitation hardenable, creep resistant. Good mechanical properties up to 760°C. Scaling resistance in air up to 850°C.

Applications

- > Comp. for Chemical plants (incl. LNG, FGD, Urea, LDPE, etc.)
- > Other Aerospace Comps.
- > Steam Valves
- > Extrusion
- > Other Oil and Gas + CPI comps.
- > Tubular Products, Flanges, Fittings
- > Fasteners, Bolts, Nuts
- > Other Power Generation Components
- > Turbine and Engine Parts (Aerosp)

Material designation		Standards	
2.4662	SEL	5660	AMS
N09901	UNS	5661	
NiCr13Mo6Ti3	EN	HR 53	BS
Alloy 901	Market grade		

Chemical composition

C	Cr	Mo	Ni	Ti	Fe
0.04	12.50	5.80	42.50	3.00	Rest

Heat treatment

Solution annealing

Temperature (°C / °F)	1075 / 1967 - 1105 / 2021	2h, oil or water
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Physical Properties at 20°C / 68°F

Density	8.15 / 0.29	[kg/dm ³ / lb/in ³]
Thermal conductivity	12 / 6.93	[W/(m.K) / BTU (IT) ft/hr/ft ² /F]
Specific heat	450 / 107.48	[J/(kg.K) / BTU (IT) lb/F]
Spec. electrical resistance	1.14 / 0.001	[Ohm.mm ² /m / Ohm.inch ² /ft]
Modulus of elasticity	205 / 29.73	[10 ³ N/mm ² / 10 ³ ksi]

Thermal Expansions

Temperature (°C / °F)	100 / 212	200 / 392	300 / 572	400 / 752	500 / 932	600 / 1112	700 / 1292	800 / 1472	900 / 1652
Thermal expansion (10 ⁻⁶ m/ (m.K) / 10 ⁻⁶ inch/(inch.F))	14.5 / 8.056	14.6 / 8.111	14.7 / 8.167	14.9 / 8.278	15.2 / 8.444	15.6 / 8.667	16.1 / 8.944	16.7 / 9.278	17.6 / 9.778

For more information see www.voestalpine.com/boehler-edelstahl

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ONE STEP AHEAD.