

Technical datasheet

Waspaloy / W-Nr. 2.4654

A nickel-based age hardenable alloy with excellent high temperature strength and good oxidation resistance.

Available products

Product form Sheet/plate	Size range from 0.4 mm thickness	Size range to 12.0 mm thickness
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Chemical composition (%)

Ni Balance	Cr 18.0-21.0	Co 12.0-15.0	Mo 3.5-5.0	Ti 2.75-3.25	Al 1.20-1.60	Fe 2.0 max	Mn 1.0 max	C 0.02-1.0
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Major specifications

ASTM B637 AMS 5544, 5828, 5708	UNS N07001
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Physical properties

Density	8.19 g/cm ³
Melting range	1330-1360°C

Mechanical properties – typical room temperature properties

Yield strength	784 MPa
Tensile strength	1175 MPa
Elongation	32 %

Key attributes

An age hardenable alloy with excellent high temperature strength and good high temperature corrosion resistance. The alloys strength and stability are higher than that which can be achieved with alloy 718. It finds application in gas turbines for critical rotating parts at service temperatures up to 650°C and for less demanding applications can be used at temperatures up to 870°C. The alloys oxidation resistance can withstand repeated thermal cycling.

Applications

Gas turbine engine components:

- Compressor and rotor discs
- Shafts
- Spacers
- Casings
- Rings and seals
- High strength fasteners