

ATLAS BALL & BEARING CO LIMITED

NIMONIC® 90 BALL DATA SHEET

Attributes High stress rupture strength and high creep resistance at high temperatures, with dynamic applications up to 920°C. Good resistance to high temperature corrosion and oxidation. Age hardenable

Specification with equivalents Alloy 90
UNS N07090
W.Nr 2.4632
W.Nr 2.4969

Chemical Analysis %

Ni	Balance	Cu	0.20 max
Cr	18.0 – 21.0	Zr	0.15 max
Co	15.0 – 21.0	C	0.13 max
Ti	2.00 – 3.00	B	0.02 max
Al	1.00 – 2.00	S	0.015 max
Fe	1.50 max	Pb	0.002 max
Mn	1.00 max	Ag	0.0005 max
Si	1.00 max	Bi	0.0001 max

Typical uses/applications Aerospace fasteners,
Gas turbine components.

Mechanical/physical properties

Hardness	350-480 Hv
Tensile strength	1500-1800 Mpa
Approx service temperature	Up to 920° C
Specific gravity (density)	8.18 g/cm ³ (0.296 lb/in ³)
Melting point	1370° C
Coefficient of Expansion	12.7 µm/m °C (20-100°C)
Modulus of rigidity	82.5 kN/mm ²
Modulus of elasticity	227 kN/mm ²

Corrosion Data Available on application

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