

# ATLAS BALL & BEARING CO LIMITED

## INCONEL® X-750 BALL DATA SHEET

**Attributes** High strength nickel-chromium alloy being precipitation hardenable\*

**Specification with equivalents** Inconel® X-750  
Alloy X-750  
UNS N07750  
DIN 2.4669

### Chemical Analysis %

Ni + Co	70.00 min	C	0.08 max
Cr	14.00 - 17.00	Mn	1.00 max
Fe	5.00-9.00	Si	0.50 max
Ti	2.25-2.75	Cu	0.50 max
Al	0.40-1.00	S	0.01 max
Nb+Ta	0.70– 1.20	Co	1.00 max

### Typical uses/applications

Include pumps and check valves where good tensile and creep-rupture strength coupled with high corrosion resistance is important.

### Mechanical/physical properties

Hardness	330 - 440 Hv
Tensile strength	1100-1500 Mpa
Approx service temperature	-200 to +370° C
Specific gravity (density)	8.28 g/cm <sup>3</sup> (0.299 lb/in <sup>3</sup> )
Melting point	1430° C
Coefficient of Expansion	12.6µm/m·°C (20-100°C)
Modulus of rigidity	75.8kN/mm <sup>2</sup>
Modulus of elasticity	218 kN/mm <sup>2</sup>
Magnetic permeability	1.002-1.0035

During manufacture the balls are not precipitation hardened, the high hardness values are obtained by work hardening.

[www.atlasball.co.uk](http://www.atlasball.co.uk)