

ATLAS BALL & BEARING CO LIMITED

MONEL® K-500 BALL DATA SHEET

Attributes

Nickel-Copper Alloy, is precipitation hardenable, due to the additions of Aluminium and Titanium. It combines the corrosion resistance of Monel®400 with extra strength and hardness.

Specification with equivalents

Monel® K-500
Alloy K-500
DIN 2.4375
ASTM N05500

Chemical Analysis %

Ni	63.0 min	C	0.25 max
Cu	27.0-33.0	Fe	2.0 max
Mn	1.5 max	Si	0.5 max
S	0.01 max	Ti	0.35-0.85
Al	2.3-3.15		

Typical uses/applications

Pumps and valves used in the manufacture of chlorinated plastics.

Mechanical/physical properties (Hardened Balls)

Tensile strength	1100-1300 Mpa
Approx service temperature	-200 to +230° C
Specific gravity (density)	8.44 g/cm ³ (0.305 lb/in ³)
Melting point	1350° C
Coefficient of Expansion	13.7 µm/m °C (20-100°C)
Modulus of rigidity	66 kN/mm ²
Modulus of elasticity	179kN/mm ²
Hardness	300-380 Hv

Corrosion Data

Good resistance to sulphuric and Hydrofluoric acids. May be used to handle hydrochloric acid, oxidising salts present will greatly accelerate corrosive attack. Resistant to neutral, alkaline and acid salts. Poor resistance to ferric chloride.