

MONEL K 400 ALLOY BALLS

Ni-Cu based alloys with good mechanical characteristics and excellent corrosion resistance. Balls are provided in the passivated condition.

Applications

Special pumps and valves, flue gas desulfurization, heat exchangers.

They are used in the paper, chemical, pharmaceutical, naval, petrol and textile industry.

Chemical composition

%C	%Si	%Mn	%S	%Ni	%Cu	%Co	%Fe	-	-	-	-
0,30 max	0,50 max	2,00 max	0,024 max	63,00-70,00	28,00-34,00	1,00 max	2,50 max	-	-	-	-

International standards

ITA	USA	GER	FRA	UK	RUS	CHN	JAP
-	N04400	2.4360	Nu 30	NA 13	-	-	-

Physical / mechanical / thermal / electric / magnetic properties

Property	Symbol	U.o.M.	Type	Notes	Values
Density	δ	g/cm ³	Physical	Room temp.	8,82
Young's modulus	E	GPa	Mechanical		177
Specific heat	c	J/kg-K	Thermal	Room temp.	436
Coefficient of linear thermal expansion	α	10 ⁻⁶ /°C	Thermal	($\Delta T=0-100^{\circ}C$)	13,7
Thermal conductivity	λ	W/(m-K)	Thermal	Room temp.	21,9
Electric resistivity	ρ	$\Omega \cdot m \cdot 10^{-9}$	Electric		529
Relative magnetic permeability	μ	-	Magnetic	Paramagnetic	1,010

Technical data

Property	Type	U.o.M.	Values	U.o.M.	Values
Hardness	Mechanical	HRC	17 - 22	-	-
Ultimate tensile strength	Mechanical	MPa	670 - 770	psix10 ^{^3}	97 - 112
Service temperature	Thermal	°C	-196 / 600	°F	-320,8 / 1112

Range

Diameters (min/max)	U.o.M.	Diameters (min/max)	U.o.M.	Precision Grade (ISO 3290)
1,000 - 100,000	mm	3/64 - 4	"	G100-200-500-1000

Corrosion Resistance

Monel 400 is resisting in contact with sea water, steam even at high temperature, caustic salts and solutions.

Good corrosion resistance in sulphuric, hydrofluoric and hydrochlorine acids, organic acids, alkaline salts, calcium chloride.

It is not resisting against ferric chloride.