

Technical datasheet

Nical 400 / CuNiFe

A nickel-copper alloy with good strength and excellent corrosion resistance to sea water and chlor alkali corrosion it is used widely in marine engineering and chemical processing equipment. It is suitable for both cold working and deep drawing.

Available products

Sheet and strip
Rod and wire
Profile wire

Major specifications

ASTM B164
Wr.N 2.4360

UNS N04400
DIN 17743

Chemical composition (%)

Ni	Fe	Cu
65	2	Balance

Physical properties

Modulus of elasticity, longitudinal, GPa	179
Coefficient of expansion 20-300°C (x10 ⁻⁶ /°C)	13.9
Thermal conductivity at 20°C, W/m.K	22
Electrical resistivity at 20°C, μΩ.cm	54
Electrical conductivity %IACS	7.5

Mechanical properties

	Temper	Thickness (mm)	Grain size (ASTM)	Vickers Hardness	Tensile strength (MPa)	Yield strength (MPa)	Elongation (%)
Strip in coil (standard)	Annealed	0.2 to 2.0	7 to 9	<140	<580	>200	>35
		>2.0 to 3.5	5 to 7	<140	<540	>180	>35
	H11	0.2 to 3.5		160-200	550-610	>300	>25
	H12	0.2 to 3.5		180-230	600-660	>500	>12
	H13	0.2 to 3.5		200-250	650-720	>560	>7
	H14	0.2 to 3.5		220-270	700-820	>650	>2
	H15	<0.2		>240	NA	NA	NA
		0.2 to 3.5		>250	>800	>700	1
Sheet	Annealed	<1.27			485-585	195 min	35 min
		1.27 - <6.35					
	H14	All thickness			>690	>620	2 min

Applications

Sprinkler
Fasteners
Chlorine valves
Oil and gas gaskets
Heat exchangers