

Technical Data Sheet

AMPCOLOY[®] 944

Extruded



Nominal composition:

Copper	(Cu)	90%
Nickel	(Ni)	7.0%
Silicon	(Si)	2.0%
Chromium	(Cr)	1.0%
Others		max 0.50%

Specifications:

D	DIN	
F	AFNOR	
GB	BS	
USA	RWMA	Class 4

Mechanical and physical properties	Units	Nominal Values
Tensile strength R_m	MPa	938
Yield strength $R_{p0.5}$	MPa	730
Elongation A_5	%	5
Brinell hardness	HB 30	294
Rockwell hardness	HRB	31
Compressive strength, 0.1 % perm. set	MPa	710
Charpyak	%	12
Modulus of elasticity	GPa	151
Density ρ	g/cm ³	8.69
Coefficient of expansion α	10 ⁻⁶ /°K	15.7
Thermal conductivity λ	W/m·°K	156
Electrical conductivity	% I.A.C.S.	30

Assurances given with respect to properties or uses are subject to written approval from AMPCO METAL.

AMPCOLOY[®] 944 has been developed by AMPCO METAL to obtain an alloy with ultimate thermal conductivity, good tensile strength and very good hardness, in order to provide an alternative to Beryllium copper, where stricter health and safety instructions on the use of noxious elements are required

APPLICATIONS:

AMPCOLOY[®] 944 is used wherever a good electrical or thermal conductivity is required together with high mechanical properties and wherever Beryllium copper is used :

Electrode holders and seam welding shafts

Spot welding electrodes, seam welding discs, projection and butt welding dies, principally for stainless steel and Monel

Plunger tips for cold chamber aluminium high pressure die casting machines and molds for low pressure die casting machines

Chill moulds for casting brass and certain bronzes

Parts of moulds for injection moulding of plastics, injection-nozzles and cooling pins