

Technical Data Sheet

AMPCOLOY[®] 91

Extruded



Nominal composition:

Cobalt + Nickel	(Co + Ni)	2.4%
Beryllium	(Be)	0.5%
Others		max. 0.5%
Copper	(Cu)	balance

Nearest international specifications:

ISO	NFA 82100	
EN	CW 104C	Typ A3/1
D	DIN 17666	W. Nr. 2.1285
F	AFNOR	UK2Be
GB	BS	
USA	CDA RWMA	C17500 Class 3

Mechanical and physical properties	Units	Nominal Values	
		≤ 2"	> 2"
Tensile strength Rm	KSI	130	105
Yield strength Rp 0.5	KSI	80	75
Elongation in 2"	%	10	17
Brinell hardness	BHN 30	240	217
Rockwell hardness	HRB	100	96
Modulus of elasticity E	KSI	18850	18850
Density ρ	LBS / IN ³	0.315	
Coefficient of expansion α	IN / IN / °F	9.44 · 10 ⁻⁶	
Thermal conductivity λ	CGS	0.497	
Electrical resistivity γ (1mm ² section)	Microhms/ Meter	33.3	
Electrical conductivity	% I.A.C.S.	52	
Specific heat Cp	BTU / LB · °F	0.1	

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

APPLICATIONS:

AMPCOLOY[®] 91 finds its own applications due to its slightly higher mechanical properties. AMPCOLOY[®] 91 is principally used for spot welding electrodes, electrodes for mesh welding, electrode holders, seam welding discs for stainless steel, Monel and nickel alloys, flash welding dies, plunger tips in aluminium high pressure die casting machines and parts for injection moulding of plastic wherever a high thermal conductivity is desirable.

WARNING

Since the alloy contains 0.5 % Beryllium, it is recommended that during any operation which is liable to create dust or fumes (for example dry grinding, polishing or welding) precautions should be taken to ensure there is no inhalation or exposure to eyes or skin. Conventional machining (for example milling and turning) is not generally considered hazardous.