

Technical Data Sheet

AMPCOLOY[®] 940

Forgings



Nominal composition:

Nickel	(Ni)	2.5%
Silicium	(Si)	0.7%
Chromium	(Cr)	max. 0.4%
Copper	(Cu)	balance

Specifications:

D	DIN	
F	AFNOR	
GB	BS	
USA	RWMA	Class 3

Mechanical and physical properties	Units	Nominal Values
Tensile strength Rm	KSI	94
Yield strength Rp 0.5	KSI	72
Elongation in 2"	%	12
Brinell hardness	BHN 30	210
Rockwell hardness	HRB	95
Reduction of area ψ	%	20
Compressive strength, 0.1 % perm. set	KSI	80
Modulus of elasticity E	KSI	19000
Density ρ	LBS / IN ³	0.315
Coefficient of expansion α	IN / IN / °F	9.72×10^{-6}
Thermal conductivity λ	CGS	0.497
Electrical resistivity γ (1mm ² section)	Microhms/ Meter	35.7
Electrical conductivity	% I.A.C.S.	48
Specific heat Cp	BTU / LB .°F	0.091

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

AMPCOLOY[®] 940 is a patented alloy which meets the demands of users of the RWMA class 3 alloys without Beryllium. In the industrialized countries, stricter health and safety instructions on the use of noxious elements have forced AMPCO METAL to develop this new alloy. It replaces the AMPCOLOY[®] 95 in practically all applications.

APPLICATIONS:

AMPCOLOY[®] 940 is used wherever a good electrical or thermal conductivity is required together with high mechanical properties:

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 moulds 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

Brake drums for paper winding rolls

Warm pressed parts for energy engineering

AMPCO METAL EXCELLENCE IN ENGINEERED ALLOYS

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