

Technical Data Sheet

AMPCOLOY® 940

Extrusions

Nominal composition:

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

Nearest international specifications:

D	DIN	
F	AFNOR	
GB	BS	
USA	RWMA	Class 3

Mechanical and physical properties	Units	≤ 1"	1" - 2"	> 2"
Tensile strength Rm	KSI	100	97	96
Yield strength Rp 0.5	KSI	75	75	74
Elongation in 2"	%	13	13	13
Brinell hardness	HBW 10/3000	210	210	210
Rockwell hardness	HRB	95	95	95
Reduction of area ψ	%	20	20	20
Compressive strength, 0.1 % perm. set	KSI	80	80	80
Modulus of elasticity E	KSI	19000	19000	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 driven 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 die casting machines

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

Brake drums for paper winding rolls.

Parts for energy engineering