

Technical Data Sheet

AMPCOLOY[®] 940

Extrusions



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	≤ 25 mm	25 - 50 mm	> 50 mm
Tensile strength Rm	MPa	689	669	662
Yield strength Rp 0.5	MPa	517	517	510
Elongation A5	%	13	13	13
Brinell hardness	HB 30	210	210	210
Rockwell hardness	HRB	95	95	95
Reduction of area ψ	%	20	20	20
Compressive strength, 0.1 % perm. set	MPa	552	552	552
Modulus of elasticity	GPa	131	131	131
Density ρ	g / cm ³	8.71		
Coefficient of expansion α	10 ⁻⁶ / °K	17.5		
Thermal conductivity λ	W / m · °K	208		
Electrical conductivity γ	m / Ω · mm ²	28		
Electrical conductivity	% I.A.C.S.	48		
Specific heat Cp	J / g · °K	0.38		

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 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