

Technical Data Sheet

AMPCOLOY® 940

Forgings

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	Nominal Values
Tensile strength Rm	MPa	648
Yield strength Rp 0.5	MPa	496
Elongation A5	%	11
Brinell hardness	HBW 10/3000	210
Rockwell hardness	HRB	95
Reduction of area ψ	%	20
Compressive strength, 0.1 % perm. set	MPa	552
Modulus of elasticity	GPa	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 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

Brake drums for paper winding rolls.

Warm pressed parts for energy engineering