

Technical Data Sheet

AMPCO[®] M6

Horizontal Continuous Cast

Nominal composition:

Aluminium	(Al)	11.0%
Iron	(Fe)	4.5%
Nickel	(Ni)	4.5%
Manganese	(Mn)	1.25%
Others		max. 0.5%
Copper	(Cu)	balance

Mechanical and physical properties	Units	Nominal Values
Tensile strength R_m	MPa (KSI)	795 (115)
Yield strength $R_{p0.2}$	MPa (KSI)	500 (72)
Elongation A_5	%	4
Brinell hardness	HBW 10/3000	262
Rockwell hardness	HRC	26
Reduction of area ψ	%	4
Compressive strength R_{mc}	MPa (KSI)	1206 (175)
Compressive strength, 0.1 % perm. set	MPa (KSI)	724 (105)
Shear strength R_{cm}	MPa (KSI)	552 (80)
Modulus of elasticity E	GPa (KSI)	124 (18000)
Charpy _{ak}	J	5.4
Fatigue (100'000'000 cycles) σ_N	MPa (KSI)	255 (37)
Density ρ	g / cm ³	7.45
Coefficient of expansion α	10 ⁻⁶ / K	16
Thermal conductivity λ	W / m · K	42
Electrical conductivity γ	m / Ω · mm ²	4.8
Electrical conductivity	% I.A.C.S.	8.2
Specific heat c_p	J / g · K	0.45

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

The special manufacturing process gives AMPCO[®] M6 mechanical properties beyond the range of commercial nickel-aluminium bronzes, it is comparable to some 'Spinoidal' alloys with an optimum balance between value versus mechanical properties.

APPLICATIONS:

AMPCO[®] M6 is a great alloy for mechanical wear applications in various industries such as molds for plastics, various toolings, bearings, wear plates, gibs, sliding parts, guides, bending dies etc... and other similar applications. It is rapidly growing in use where higher mechanical properties together with corrosion-resistance is required.