

Technical Data Sheet

AMPCO[®] 18.136

Centrifugals



Nominal composition:

Aluminium	(Al)	10.5%
Iron	(Fe)	3.5%
Others		max. 0.5%
Copper	(Cu)	balance

Mechanical and physical properties	Units	Nominal Values
Tensile strength R_m	MPa	689
Yield strength $R_p 0.5$	MPa	289
Elongation A_5	%	20
Brinell hardness	HB 30	170
Rockwell hardness	HRB	87
Reduction of area ψ	%	20
Compressive strength R_{mc}	MPa	979
Proportional limit in compression R_{pc}	MPa	221
Shear strength R_{cm}	MPa	386
Modulus of elasticity E	GPa	110
Charpy a_K	J	22
Izod a_K	J	30
Fatigue (100'000'000 cycles) σ_N	MPa	214
Density ρ	g / cm ³	7.45
Coefficient of expansion α	10 ⁻⁶ / °K	16.2
Thermal conductivity λ	W / m · °K	59
Electrical conductivity γ	m / Ω · mm ²	7.5
Electrical conductivity	% I.A.C.S.	13
Specific heat c_p	J / g · °K	0.42

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

AMPCO[®] 18.136 is a variation of AMPCO[®] 18 specifically heat-treated to increase the impact resistance by 40 % (see Charpy values) and the elastic limit in compression by 10 % without affecting the tensile strength of the alloy.

APPLICATIONS:

This AMPCO[®] 18.136 has been tailor-made for steel mill applications as slippers and screw-down nuts and for similar applications where an extreme wear pressure is combined with important impact loading.