Technical Data Sheet

AMPCO® 18.22

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	KSI	115
Yield strength $Rp_{0.5}$	KSI	59
Elongation in 2"	%	10
Brinell hardness	BHN 30	228
Rockwell hardness	HRB	98
Reduction of area ψ	%	8
Compressive strength ultimate R_{mc}	KSI	155
Compressive strength, 0.1 % perm. set	KSI	64
Proportional limit in compression R_{pc}	KSI	49
Shear strength R_{cm}	KSI	62
Modulus of elasticity E	KSI	16000
Charpy $_{aK}$	LBS.FT	8
Izod $_{aK}$	LBS.FT	12
Fatigue (100'000'000 cycles) σ_N	KSI	36
Density ρ	LBS / IN³	0.269
Coefficient of expansion α	IN / IN / °F	$9 \cdot 10^{-6}$
Thermal conductivity λ	CGS	0.141
Electrical resistivity γ (1mm² section)	Microhms/ Meter	133
Electrical conductivity	% I.A.C.S.	13
Specific heat c_p	BTU / LB · °F	0.1

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

By varying the heat treatment and by close control of all operations, the characteristic duplex structure of AMPCO® 18 is refined to produce a material AMPCO® 18.22 having substantially higher ultimate strength, yield strength and hardness.

APPLICATIONS:

AMPCO® 18.22 has been developed to meet the exact requirements of the aircraft industry for an alloy having increased physical properties, hardness and sufficient elongation to withstand important impacts and loads. It is recommended for use as bushings, bearings liners, inserts, piston parts, nuts and slides, etc.