

Technical Data Sheet

AMPCO[®] 18.22

Sand Castings



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	105
Yield strength $R_p 0.5$	KSI	55
Elongation in 2"	%	8
Brinell hardness	BHN 30	223
Rockwell hardness	HRB	97
Reduction of area ψ	%	6
Compressive strength ultimate R_{mc}	KSI	155
Proportional limit in compression R_{pc}	KSI	50
Shear strength R_{cm}	KSI	60
Modulus of elasticity E	KSI	16000
Charpy a_K	LBS.FT	6
Izod a_K	LBS.FT	10
Fatigue (100'000'000 cycles) σ_N	KSI	36
Density ρ	LBS / IN ³	0.269
Coefficient of expansion α	IN / IN / °F	$9 \cdot 10^{-6}$
Thermal conductivity λ	CGS	0.141
Electrical resistivity γ (1mm ² 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.