

## Technical Data Sheet

# AMPCO<sup>®</sup> 18.136

## 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	90
Yield strength $R_p 0.5$	KSI	39
Elongation in 2"	%	18
Brinell hardness	BHN 30	166
Rockwell hardness	HRB	86
Reduction of area $\psi$	%	18
Compressive strength ultimate $R_{mc}$	KSI	140
Proportional limit in compression $R_{pc}$	KSI	32
Shear strength $R_{cm}$	KSI	55
Modulus of elasticity E	KSI	16000
Charpy $a_K$	LBS.FT	14
Izod $a_K$	LBS.FT	20
Fatigue (100'000'000 cycles) $\sigma_N$	KSI	30
Density $\rho$	LBS / IN <sup>3</sup>	0.269
Coefficient of expansion $\alpha$	IN / IN / °F	$9 \cdot 10^{-6}$
Thermal conductivity $\lambda$	CGS	0.141
Electrical resistivity $\gamma$ (1mm <sup>2</sup> 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.

AMPCO<sup>®</sup> 18.136 is a variation of AMPCO<sup>®</sup> 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<sup>®</sup> 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.