

D16

Material designation		Chemical composition*			
C62300		Elements	% mean	Impurities	% max.
		Fe	3.4	Pb	0.05
		Al	9.4	Sn	0.2
				Si	0.1
ASTM B150	C62300			Mn	0.25
AMS 4635	C62300			Zn	0.25
				Ni	0.45
		Cu	Balance	Others	0.5

* Reference values in % by weight

Properties and typical applications

C62300 is a resistant alloy to wear and corrosion with good mechanical properties. Nuts, bolts, valve guides and stems ... Also used in the marine equipments.

Physical properties at 20°C		Heat treatment	
Density (g/cm ³)	7.6	Melting range (°C)	1045-1055
Young modulus (GPa)	117	Hot working (°C)	900-950
Thermal expansion coefficient (20-300°C) (10 ⁻⁶ /K)	16	Annealing temperature (°C)*	650-750
Thermal conductivity (W/m.K)	53	Stress relieving treatment (°C)**	300-400
Thermal capacity (J/Kg.K)	420	<i>* Annealing treatment of a material leads to reduce its hardness and increase its ductility.</i>	
Electrical conductivity (% I.A.C.S.)	12	<i>** Stress relieving treatment allows to eliminate the residual stresses present in the material in order to avoid the stress corrosion cracking.</i>	

Forming		Joining	
Hot forming	Good	Soldering	
Cold forming	Not recommended	Soft	Not recommended
Machinability	50% (CuZn39Pb3 = 100%)	Hard	Fair
Corrosion resistance		Welding	
The bronzes of aluminum have a high corrosion resistance, in particular in the sea environments.		Gaz welding	Not recommended
		Inert gas shielded arc welding	Good
		Resistance welding	Good

Mechanical properties according to ASTM - B150					
Condition of material	Diameter [mm]		Rp0,2 [Mpa]	Rm [Mpa]	A(%)
	from	to	min.	min.	min.
Drawn and heat treated	6	12	345	620	12
	12	25	305	605	15
	25	50	275	580	15
	50	80	255	525	20

Fabrication range

Available forms:



Do not hesitate to contact us for further information regarding the dimensions, tolerances and metallurgical conditions. Our technical teams are by your side to help you succeed in your projects.

info@m-lego.com