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D14

Material designation	
C62400	
ASTM B150	C62400

Chemical composition*			
Elements	% mean	Impurities	% max.
Fe	3.8	Pb	0.05
Al	10.4	Sn	0.1
		Si	0.1
		Zn	0.5
		Ni	0.1
Cu	Balance	Others	0.5

* Reference values in % by weight

Properties and typical applications

It is an excellent friction material characterized by a very good resistance to wear and fatigue. The most common applications include valve and pump components for various sectors (aeronautics, automotive ...), as well as marine equipment.

Physical properties at 20°C	
Density (g/cm3)	7.4
Young modulus (GPa)	117
Thermal expansion coefficient (20-300°C) (10^{-6}/K)	16
Thermal conductivity (W/m.K)	59
Thermal capacity (J/Kg.K)	420
Electrical conductivity (% I.A.C.S.)	12

Heat treatment	
Melting range (°C)	1040-1090
Hot working (°C)	800-900
Annealing temperature (°C)*	650-750
Stress relieving treatment (°C)**	300-400

**** Annealing treatment of a material leads to reduce its hardness and increase its ductility.***

***** Stress relieving treatment allows to eliminate the residual stresses present in the material in ordrer to avoid the stress corrosion cracking.***

Forming	
Hot forming	Excellent
Cold forming	Not recommanded
Machinability	50% (CuZn39Pb3 = 100%)

Corrosion resistance

The bronzes of aluminum have a high corrosion resistance, in particular in the sea environments.

Joining	
Soldering	
Soft	Not recommanded
Hard	Fair
Welding	
Gaz welding	Not recommanded
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	310	655	10
	12	25	310	655	12
	25	50	295	620	12
	50	80	275	620	12

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.
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