CW716R

MANGANESE BRONZE

DESCRIPTION

CW716 is a special brass with medium strength, high resistance to atmospheric corrosion as well as good sliding properties due to the alloying constituent's manganese and aluminium. CW716R is used as standard bearing alloy for medium load applications in machine construction.

CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	59.00	61.50
Pb	-	1.00
Sn	-	0.30
Fe	-	0.10
Al	0.30	1.30
Mn	0.60	1.80
Sl	-	0.50
Ni	-	0.60
Total Others	-	0.30
Zn	Remainder	

MECHANICAL PROPERTIES ACCORDING TO EN12163 CW716R (AS PER TEMPER R440)

Range (mm)	From	To	UTS Min (Mpa)	PS Min (Mpa)	Elo Min (%)	Hardness Min	Hardness Max
Round (Dia)	8	75	440	200	15	-	-
Hex (a/F)	8	60	440	200	15	-	-
Square (A/F)	8	60	440	200	15	-	
Rectangle (Thickness)	8	50	440	200	15		

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PHYSICAL PROPERTIES

Electrical conductivity	7.8 %IACS
Thermal conductivity	63 W/(m•K)
Thermal expansion coefficient (0–300 °C)	20.6 10-6/K
Density	8.12 g/cm³
Modulus of elasticity	93 Gpa

FABRICATION PROPERTIES

Technique	Suitability
Machinability (CuZn39Pb3 = 100 %)	40%
Capacity for being cold worked	Poor
Capacity for being hot worked	good
Resistance welding (butt weld)	good
Inert gas shielded arc welding	fair
Gas welding	Poor
Hard soldering	fair
Soft soldering	Poor
Melting range	860-910 °C
Hot working	600–700 °C
Soft annealing	500–650 °C (1–3 hr)
Thermal stress relieving	300–430 °C (1-3 hr)

TYPICAL USES

- Bushings
- Shafts

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