

# CW707R

## LEAD FREE BRASS

### DESCRIPTION

CW707R is a dezincification resistant brass with excellent cold working properties and a pure  $\alpha$ -structure. This alloy is used for applications in warm, acidic waters. CW707R is also suitable for coining, riveting, crimping, flanging, cold extrusion or other cold working operations.

### CHEMICAL COMPOSITION

Elements	Min (%)	Max (%)
Cu	68.50	71.50
Pb	-	0.07
Fe	-	0.05
As	0.02	0.06
Total Others	-	0.20
Zn	Remainder	

### MECHANICAL PROPERTIES (AS PER TEMPER R340)

Range (mm)	From	To	UTS Min (Mpa)	PS Min (Mpa)	Elongation Min (%)	Hardness Min (HV)	Hardness Max
Round (Dia)	1.5	75.00	340.00	130	45	-	-
Hex (A/F)	3	70.00	340.00	130	45	-	-
Square (A/F)	3	65.00	340.00	130	45	-	-

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## PHYSICAL PROPERTIES

Electrical conductivity %IACS	28%
Thermal conductivity W/(m-K)	126
Thermal expansion coefficient (0-300 °C)	10-6/K19.7
Density	8.55 g/cm3
Modulus of elasticity	114 Gpa

## FABRICATION PROPERTIES

Technique	Suitability
Machinability (CuZn39Pb3 = 100 %)	25%
Capacity for being cold worked	Excellent
Capacity for being hot worked	Fair
Resistance welding (butt weld)	Good
inert gas shielded arc welding	Fair
Gas welding	Good
Hard soldering	Excellent
Soft soldering	Excellent
Melting range	910-965 °C
Hot working	750 - 870 °C
Soft annealing (1-3 h)	450-680 °C
Thermal stress relieving (1-3 h)	200-300 °C

## TYPICAL USES

- > Architecture
- > Automotive
- > Builders Hardware
- > Consumer
- > Electrical
- > Fasteners
- > Industrial
- > Ordnance
- > Plumbing