

# IBC Advanced Alloys - Copper Alloys



## Product Data Sheet - C17200

C17200 is manufactured to provide a combination of high strength and hardness properties coupled with superior thermal properties. This range of properties makes C17200 the premier material for copper alloy molds and a wide range of other applications from oil and gas to aerospace.

## Chemical Composition (Weight Percent)

DELIVERING SOLUTIONS						
Alloy	Beryllium	Cobalt	Nickel	Co + Ni	Co + Ni + Fe	Copper
C17200	1.80 – 2.00	-	0.20 min	0.20 min	0.60 max	Balance

## Physical and Chemical Properties

DELIVERING SOLUTIONS					
Density lb/in <sup>3</sup>	Elastic Modulus (10 <sup>6</sup> psi)	Coefficient of Thermal Expansion (in./in./°F)	Thermal Conductivity (btu/ft.hr.°F)	Melting Temperature °F	Heat Capacity (J/gK)
0.302	19	9.7 x10 <sup>-6</sup>	56	1600-1800	0.44

## Typical Mechanical Properties

DELIVERING SOLUTIONS							
Alloy	Temper	Thickness	Tensile Strength ksi	0.2% Offset Yield ksi	Elongation	Hardness HRc or HRb	Electrical Conductivity % IACS
C17200 Plate	A(TB00)	All sizes	60-85	20-40	20 min.	B45-85	17 min.
C17200 Plate	AT(TF00)	All sizes	165-200	140-175	4 min.	C36-42	22 min.
C17200 Rounds	A(TB00)	All sizes	60-85	20-40	20 min.	B45-85	17 min.
C17200 Rounds	AT(TF00)	Over 3" dia	165-200	130-175	4 min.	C36-42	22 min.

## Forms Available:

**Plate:** Thickness 1.00 to 18.00 inches, width 36 inches max. x standard mill lengths up to 115 inches.

**Rounds:** Diameter 1.00 to 18.00 inches, standard mill lengths.

**Rings:** To 55.0 inches O.D.

### COPPER ALLOYS

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