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^3	Elastic Modulus (10^6 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^{-6}	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.

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