



TECHNICAL DATA SHEET

PRODUCT: COPPER ALLOY UNS-C28000

PRODUCT BASIC INFORMATION:

Alloy:	UNS-C28000	Muntz Metal
Form:	--	
Temper:		--
Dimension:	--	
Surface Finish:	--	
Similar Alloys:	UNS C85500 - UNS C46500 - UNS C37000 - UNS C46400 - UNS C37100 - UNS C48200	
Application:	General Use	

CHEMICAL COMPOSITION:

Element		Percentage (%)
Aluminum	(Al)	--
Silicon	(Si)	--
Iron	(Fe)	0.07 max
Copper	(Cu)	59.0 – 63
Manganese	(Mn)	--
Magnesium	(Mg)	--
Lead	(Pb)	0.09 max
Zinc	(Zn)	balance
Titanium	(Ti)	--
Remainder Each		--
Remainder Total		--

MECHANICAL PROPERTIES:

Properties	Metric	Imperial
Tensile strength	485 MPa	70343 psi
Tensile Strength, Yield	345 MPa	50038 psi
Elongation	10%	10%
Elastic modulus	105 GPa	15228 ksi
Shear Modulus	39.0 GPa	5656 ksi
Fatigue Strength	--	--

PHYSICAL DATA :

	Metric Units	Imperial Unit
Melting Point (Liquidus)	905 °C	1661 °F
Melting Point (Solidus)	900 °C	1652 °F
Density	8.39 g/cc @ 20°C	0.303 lb/in ³ @ 68°F
Specific Gravity	8.39	8,39
Coefficient of Thermal Expansion	--	11.6 µin/in°F
Thermal Conductivity	123 W/mK @ 20°C	--
Thermal Capacity (Specific Heat):	--	-
Electrical Conductivity	28%	IACS
Electrical Resistivity:	0.00000616 Ω.cm @ 20°C	--
Modulus of Elasticity (tension)	105 GPa @ 20°C	15228 ksi
Modulus of Rigidity (torsion)	38 GPa @ 20°C	5600 ksi
Poisson's Ratio	--	--

PROCESSING PROPERTIES:

	METRIC	ENGLISH
Annealing Temperature:	425 – 600 °C	797 - 1112 °F
Hot-Working Temperature:	625 – 800 °C	1157 – 1472 °F
Recrystallization Temperature:	--	--

DESCRIPTIVE PROPERTIESD:

	METRIC	ENGLISH
Velocity of Sound:	--	--

OTHER PROPERTIES:

Typical Applications	architectural, large nuts and bolts, brazing rod, condenser plates, heat exchanger and condenser tubing, hot forgings.
Machinability	The machinability rating of this alloy is 40. (Where Alloy 360 FC Brass is 100).
Weldability	Soldering is rated as "excellent", brazing is rated as "excellent", oxyacetylene welding is rated as "good", gas shielded arc welding is rated as "fair", coated metal arc welding is "not recommended", spot welding is rated as "good", seam welding is "not recommended" and butt welding is rated as "good".
Heat Treatment	---
Hot Working	This alloy's capacity for being hot formed is rated as "excellent".
Cold Working	The capacity for cold working this alloy is rated as "fair".
Annealing	The annealing temperature for this alloy is between 800 and 1100 F.
Forging	The hot forgeability rating of this alloy is 90. (Forging Brass=100). The recommended hot working temperature for this alloy is between 1150 and 1450 F.
Hardening	--

<u>Product</u>	<u>Specification</u>
Bar	ASTM - B36/B36M - BRASS PLATE, SHEET, STRIP AND ROLLED BAR
Plate	ASTM - B36/B36M - BRASS PLATE, SHEET, STRIP AND ROLLED BAR
Seamless Tube	ASTM - SB135 - SEAMLESS BRASS TUBE
Seamless Condenser Tube & Ferrule Stock	ASTM - SB111 - COPPER AND COPPER ALLOY SEAMLESS CONDENSER TUBES & FERRULE STOCK
	ASTM - B111/B111M - COPPER AND COPPER ALLOY SEAMLESS CONDENSER TUBES AND FERRULE STOCK
Tube	ASTM - B135/B135M - Seamless Brass Tube - <u>Seamless (Metric)</u>
	ASTM - B135 - Tube, Seamless
	FEDERAL - WW-T-791 - TUBING: BRASS, SEAMLESS
Sheet	ASTM - B36/B36M - BRASS PLATE, SHEET, STRIP AND ROLLED BAR
Strip	ASTM - B36/B36M - BRASS PLATE, SHEET, STRIP AND ROLLED BAR

APPLICATIONS

Principal Design Features

C28000 Muntz Metal, also known as 60/40, is copper alloyed with zinc. C280 Muntz is most commonly found in sheet and plate form. Cu Zn40 is considered a duplex alpha-plus-beta brass and has excellent hot-working properties but is less corrosion-resistant than C464 Naval Brass. C28000 Muntz is commonly used in architectural applications, including decorative panels, elevators, trim work and signage. Compared to the yellow tones of C260 Cartridge Brass, C280 Muntz has a warmer appearance that readily takes to polish

PACKAGING, HANDING & STORAGE:

Package:

Packed in waterproof Kraft, fastened by steel straps on wood pallets, suitable for handling, loading and unloading from the trunks or containers, suitable for export ocean forwarding.

Handling:

Prevent the goods hurting the people who are moving, loading, unloading, especially pay attention to the rolling and dropping for the coils.

Storage:

Stored in indoor area on plain floor, free away from moisture, water, snow, animal oils and dye wastes, avoid storing with acid or basic chemical goods.

