



ALLOY

C67600

Data Sheet

Typical Chemistry & Mechanical Properties

Alloy Number	Name	Chemical Composition (%)	Tensile Strength (KSI)	Yield Strength (KSI)	Elongation (%)	Rockwell B Hardness	Remarks
UNS C67600	Manganese Bronze	Cu: 57.0 - 60.0 Pb: 0.50 - 1.00 Sn: 0.50 - 1.50 Fe: 0.40 - 1.30 Mn: 0.05 - 0.50 Zn: Rem	84	60	19	90	High strength bronze alloy containing tin and manganese.

Straightness Tolerances

Round	All Sizes	1/4" in any 10' portion
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Shapes and Sizes

Round	0.375" to 4.000"
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Drawn Length Tolerances

0.375" to 2.000" (Inclusive)	+/-0.500"
2.000" to 3.000" (Inclusive)	+/-0.500"
3.000" to 4.000" (Inclusive)	+/-0.500"

Notes:

Standard Lengths: 12', 14', 15' & 16'
 All other lengths considered non-standard
 Minimum Length: 9' - 11" (119")

Diameter Tolerances

	Round
Up to 1.000" (Inclusive)	+/- 0.003"
>1.000" to 2.000" (Inclusive)	+/- 0.004"
>2.000" to 2.500" (Inclusive)	+/- 0.004"
>2.500" to 3.000" (Inclusive)	+/- 0.005"
>3.000" to 3.500" (Inclusive)	+/- 0.006"
>3.500" to 4.000" (Inclusive)	+/- 0.007"



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General Characteristics: Mueller Brass Company's C67600 is a leaded bronze alloy containing manganese and tin. The alloy is characterized by its toughness, high strength and resistance to corrosion. C67600 Manganese Bronze Alloy is readily forgeable and possesses good soldering and brazing properties.

Physical Properties (English Units)

Density	0.302lbs/in ³ (at 68°F)
Melting Point	1590°F (solidus)
Thermal Conductivity	61.1 BTU/Sq ft/ft - hr/°F (at 68°F)
Avg. Coefficient of Thermal Expansion (from 68°F to temperature)	11.8 micron in.in - °F
Electrical Conductivity	24% IACS

Applicable Specifications:

Form	Standard
Rod & Bar	ASTM B138
Rod & Bar (forging)	ASTM B124
Forgings	ASTM B283

Fabrication Properties:

Joining Technique	Suitability
Soldering	Excellent
Brazing	Excellent
Oxyacetylene Welding	Good
Gas Shielded Arc Welding	Fair
Coated Metal Arc Welding	Fair
Spot Welding	Good
Seam Welding	Good
Butt Welding	Good
Capacity for Being Cold Worked	Poor
Capacity for being Hot Formed	Excellent
Foregability Rating	80
Machinability Rating	60

Typical Uses:

Product	Desired Attributes
Gate Valve Stems	Corrosion Resistance
Gate Valve Stems	Machining Characteristics
Gate Valve Stems	Mechanical Properties
Valve Balls	Corrosion Resistance
Valve Balls	Wear Resistance
Valve Balls	Machining Characteristics
Welding Rod	Electrical Conductivity
Welding Rod	Corrosion Resistance

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