

C67300

Wrought

| | |
|-----------------------------|------------------|
| Product Description: | Manganese Bronze |
| Tempers: | H02 Half-Hard |
| Solids: | ¾" to 3" OD |
| Hex: | Consult Mill |
| Rectangles: | Consult Mill |
| Standard Lengths: | 144" |

Typical Uses

| | |
|-------------------|--|
| Fasteners | fasteners, lead screw nuts |
| Industrial | bearings, bushings, drive shafts, gears/cams, idler pins, piston heads, propeller shafts, pump parts, seal rings, shaft bushings, sleeve bearings, spindles, thrust bearings, wear plates, clutch bearings |
| Marine | hardware, valve seats |
| Other | connecting rods |

Similar or Equivalent Specification

| CDA | ASTM | ASARCON | SAE | AMS | FEDERAL | MILITARY | OTHER |
|--------|------|---------|--------------|-----|---------|----------|-------|
| C67300 | | | J461 J463 | | | | |

Chemical Composition

| Cu% ¹ | Pb% | Sn% | Zn% | Fe% | Ni% ² | Al% | Mn% | Si% |
|------------------|---------------|------|------|------|------------------|------|---------------|---------------|
| 58.00- 63.00 | 0.40- 3.00 | 0.30 | Rem. | 0.50 | 0.25 | 0.25 | 2.00- 3.50 | 0.50- 1.50 |

Chemical Composition according to SAE J461 and SAE J463

¹Cu value includes Ag.

²Ni value includes Co.

Note: Cu + Sum of Named Elements, 99.5% min. Single values represent maximums.

Machinability

| Copper Alloy UNS No. | Machinability Rating | Density (lb/cu in at 68°) |
|----------------------|----------------------|---------------------------|
| C67300 | 70 | 0.300 |

Mechanical Properties

C67300 continued

Mechanical Properties according to SAE J461 AND SAE J463
C67300
H02 Half-Hard

SIZE RANGE: UP TO 1" INCLUSIVE

| Tensile Strength, min | | Yield Strength, at .5% Extension Under Load, min | | Elongation, in 2 in. or 50 mm min | Rockwell "B" Hardness | Remarks |
|-----------------------|-----|--|-----|-----------------------------------|-----------------------|---------|
| ksi | MPa | ksi | MPa | % | min HRB | |
| 65 | 448 | 40 | 276 | 12 | 70 | |

SIZE RANGE: OVER 1" TO 3" INCLUSIVE

| Tensile Strength, min | | Yield Strength, at .5% Extension Under Load, min | | Elongation, in 2 in. or 50 mm min | Rockwell "B" Hardness | Remarks |
|-----------------------|-----|--|-----|-----------------------------------|-----------------------|---------|
| ksi | MPa | ksi | MPa | % | min HRB | |
| 58 | 400 | 35 | 241 | 15 | 70 | |

SIZE RANGE: OVER 3"

| Tensile Strength, min | | Yield Strength, at .5% Extension Under Load, min | | Elongation, in 2 in. or 50 mm min | Rockwell "B" Hardness | Remarks |
|-----------------------|-----|--|-----|-----------------------------------|-----------------------|---------|
| ksi | MPa | ksi | MPa | % | min HRB | |
| 55 | 380 | 30 | 205 | 18 | 65 | |

Physical Properties

| | US Customary | Metric |
|----------------------------------|--|---|
| Melting Point – Liquidus | 1605° F | 874° C |
| Density | 0.3 lb/in ³ at 68° F | 8.3 gm/cm ³ at 20° C |
| Specific Gravity | 8.3 | 8.3 |
| Electrical Conductivity | 22% IACS at 68° F | 0.13 MegaSiemens/cm at 20° C |
| Thermal Conductivity | 55 Btu · ft/(hr · ft ² · °F) at 68° F | 95 W/m at 20° C |
| Coefficient of Thermal Expansion | 11 · 10 ⁻⁶ per °F (68°-572° F) | 19 · 10 ⁻⁶ per °C (20°-300° C) |
| Modulus of Elasticity in Tension | 17000 ksi | 117210 MPa |

Physical Properties provided by CDA

