



## ■ Continuous Cast Products

C86300 Manganese Bronze  
C89835 Bismuth Tin Bronze  
C90300 Tin Bronze  
C93200 Leaded Tin Bronze  
C95400 Aluminum Bronze  
C95500 Nickel Aluminum Bronze  
AMS 4880-C95510 Nickel Aluminum Bronze  
C95900 Aluminum Bronze  
(All above alloys are standard-stocked items)

## ■ Wrought Drawn Products

C31400 Leaded Commercial Bronze  
C51000 Phosphor Bronze  
C54400 Phosphor Bronze  
C63000 Nickel Aluminum Bronze  
AMS 4590-C63020 Nickel Aluminum Bronze  
C64200 Aluminum Bronze  
C67300 Manganese Bronze  
(All above alloys are standard-stocked items)

## SPECIAL ALLOYS AVAILABLE UPON REQUEST



Concast offers a complete line of stocked and custom-made products. When Concast customers request special alloys and special sizes, we respond with products designed to meet their exacting specifications.

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■ All Concast plants are ISO 9001 certified

## Continuous Cast Products

| Copper Alloy UNS No. | Material Description     | Chemical Properties |             |             |             |           |      |           |             |           |      |      |       | Mechanical Properties |                 |          | Typical Uses  |
|----------------------|--------------------------|---------------------|-------------|-------------|-------------|-----------|------|-----------|-------------|-----------|------|------|-------|-----------------------|-----------------|----------|---|
|                      |                          | Cu%                 | Pb%         | Sn%         | Zn%         | Fe%       | P%   | Ni%       | Al%         | Mn%       | S%   | Sb%  | Si%   | Tensile ksi           | Yield ksi       | Elong. % |   |
| C83600               | Leaded Red Brass         | 84.00-86.00         | 4.00-6.00   | 4.00-6.00   | 4.00-6.00   | 0.30      | 0.05 | 1.00      | 0.005       |           | 0.08 | 0.25 | 0.005 | 36                    | 19              | 15       | ornamental fixtures, pump parts, hardware, couplings    |
| C86300*              | Manganese Bronze         | 60.00-66.00         | 0.20        | 0.20        | 22.00-28.00 | 2.00-4.00 |      | 1.00      | 5.00-7.50   | 2.50-5.00 |      |      |       | 110                   | 62              | 14       | brackets, switches, nuts, bushings, marine hardware     |
| C86500               | Manganese Bronze         | 55.00-60.00         | 0.40        | 1.00        | 36.00-42.00 | 0.40-2.00 |      | 1.00      | 0.50-1.50   | 0.10-1.50 |      |      |       | 70                    | 25              | 25       | weld guns, brackets, struts, marine propellers, hooks   |
| C89835**             | Bismuth Tin Bronze       | 85.00-89.00         | 0.05        | 6.00-7.50   | 2.00-4.00   | 0.20      | 0.10 | 1.00      | 0.005       |           | 0.08 | 0.35 | 0.005 | 30                    | 14              | 6        | faucets, pump components, housings, small gears         |
| C90300*              | Tin Bronze               | 86.00-89.00         | 0.30        | 7.50-9.50   | 3.00-5.00   | 0.20      | 0.05 | 1.00      | 0.005       |           | 0.05 | 0.20 | 0.005 | 44                    | 22              | 18       | bearings, heavy construction equipment, bushings        |
| C90500               | Tin Bronze               | 86.00-89.00         | 0.30        | 9.00-11.00  | 1.00-3.00   | 0.20      | 0.30 | 1.00      | 0.005       |           | 0.05 | 0.20 | 0.005 | 44                    | 25              | 10       | clamps, heavy construction equipment, nuts, connectors  |
| C90700               | Tin Bronze               | 88.00-90.00         | 0.50        | 10.00-12.00 | 0.50        | 0.15      | 0.30 | 0.50      | 0.005       |           | 0.05 | 0.20 | 0.005 | 40                    | 25              | 10       | restaurant equipment, gear boxes, bearings, gears       |
| C91100               | High Tin Bronze          | 82.00-85.00         | 0.25        | 15.00-17.00 | 0.25        | 0.25      | 1.00 | 0.50      | 0.005       |           | 0.05 | 0.20 | 0.005 | 35                    | 25              | 2        | piston rings, bearings                                  |
| C92900               | Leaded Nickel Tin Bronze | 82.00-86.00         | 2.00-3.20   | 9.00-11.00  | 0.25        | 0.20      | 0.50 | 2.80-4.00 | 0.005       |           | 0.05 | 0.25 | 0.005 | 45                    | 25              | 8        | cams, gears, wear plates, pump bodies, worm gears       |
| C93200*              | Leaded Tin Bronze        | 81.00-85.00         | 6.00-8.00   | 6.30-7.50   | 2.00-4.00   | 0.20      | 0.15 | 1.00      | 0.005       |           | 0.08 | 0.35 | 0.005 | 35                    | 20              | 10       | machine parts, washers, pumps, bearings, fittings       |
| C93700               | High-Leaded Tin Bronze   | 78.00-82.00         | 8.00-11.00  | 9.00-11.00  | 0.80        | 0.70      | 0.10 | 0.50      | 0.005       |           | 0.08 | 0.70 | 0.005 | 35                    | 20              | 6        | brackets, nuts, bearings, corrosion resistant castings  |
| C93800               | High-Leaded Tin Bronze   | 75.00-79.00         | 13.00-16.00 | 6.30-7.50   | 0.80        | 0.15      | 0.05 | 1.00      | 0.005       |           | 0.08 | 0.80 | 0.005 | 25                    | 16              | 5        | bearings, pumps, machine parts, railroad applications   |
| C94100               | High-Leaded Tin Bronze   | 72.00-79.00         | 18.00-22.00 | 4.50-6.50   | 1.00        | 0.25      | 0.50 | 1.00      | 0.005       |           | 0.08 | 0.80 | 0.005 | 25                    | 17              | 7        | thrust block  |
| C94300               | High-Leaded Tin Bronze   | 67.00-72.00         | 23.00-27.00 | 4.50-6.00   | 0.80        | 0.15      | 0.08 | 1.00      | 0.005       |           | 0.08 | 0.80 | 0.005 | 21                    | 15              | 7        | soft metal applications, railroad applications          |
| C95400*              | Aluminum Bronze          | 83.00 min.          |             |             |             | 3.00-5.00 |      | 1.50      | 10.00-11.50 | 0.50      |      |      |       | 85                    | 32              | 12       | weld guns, nuts, bushings, landing gear parts, valves   |
| C95500*              | Nickel Alum. Bronze      | 78.00 min.          |             |             |             | 3.00-5.00 |      | 3.00-5.50 | 10.00-11.50 | 3.50      |      |      |       | 95                    | 42              | 10       | window hardware, landing gear parts, bushings, gears    |
| AMS 4880-C95510*     | Nickel Alum. Bronze      | 78.00 min.          |             | 0.20        | 0.30        | 2.00-3.50 |      | 4.50-5.50 | 9.70-10.90  | 1.50      |      |      |       | 95 <sup>1</sup>       | 56 <sup>1</sup> | 9        | landing gear parts, bushings, hydraulic seal components |
| C95900*              | Aluminum Bronze          | Rem.                |             |             |             | 3.00-5.00 |      | 0.50      | 12.00-13.50 | 1.50      |      |      |       |                       |                 |          | gears, worm drives                                      |

\*standard-stocked alloys

<sup>1</sup>Bi% 1.75-2.75

<sup>1</sup>Castings 4.0+

Single values within Chemical Properties, unless otherwise noted, represent maximums.

## Wrought Drawn Products

| Copper Alloy UNS No. | Material Description                  | Chemical Properties |           |           |           |           |           |           |             |      |           |           |      | Mechanical Properties <sup>1</sup> |           |          |             | Typical Uses   |
|----------------------|---------------------------------------|---------------------|-----------|-----------|-----------|-----------|-----------|-----------|-------------|------|-----------|-----------|------|------------------------------------|-----------|----------|-------------|--|
|                      |                                       | Cu%                 | Pb%       | Sn%       | Zn%       | Fe%       | P%        | Ni%       | Al%         | Co%  | Mn%       | Si%       | As%  | Tensile ksi                        | Yield ksi | Elong. % | Std. Temper |  |
| C31400*              | Leaded Commercial Bronze              | 87.50-90.50         | 1.30-2.50 |           | Rem.      | 0.10      |           | 0.70      |             |      |           |           |      | 50                                 | 30        | 7        | H02         | door knobs, electrical connectors, nuts, screws          |
| C31600               | Leaded Commercial Bronze <sup>2</sup> | 87.50-90.50         | 1.30-2.50 |           | Rem.      | 0.10      | 0.04-0.10 | 0.70-1.20 |             |      |           |           |      | 50                                 | 30        | 7        | H02         | hardware, screws, electrical connectors, fasteners, nuts |
| C51000*              | Phosphor Bronze 5% A                  | Rem.                | 0.05      | 4.20-5.80 | 0.30      | 0.10      | 0.03-0.35 |           |             |      |           |           |      | 70                                 |           | 13       | H04         | bridge bearing plates, lock washers, springs, fasteners  |
| C52100               | Phosphor Bronze 8% C                  | Rem.                | 0.05      | 7.00-9.00 | 0.20      | 0.10      | 0.03-0.35 |           |             |      |           |           |      | 85                                 |           | 12       | H04         | bridge bearing plates, clips, cotter pins, marine parts  |
| C53400               | Phosphor Bronze B-1                   | Rem.                | 0.08-1.20 | 3.50-5.80 | 0.30      | 0.10      | 0.03-0.35 |           |             |      |           |           |      | 60                                 |           | 10       | H04         | bushings, bearings, fasteners                            |
| C54400*              | Phosphor Bronze B-2                   | Rem.                | 3.00-4.00 | 3.50-4.50 | 1.50-4.50 | 0.10      | 0.01-0.50 |           |             |      |           |           |      | 60                                 |           | 10       | H04         | gears, electrical connectors, bearings, shafts, pinions  |
| C63000*              | Nickel Aluminum Bronze                | Rem.                |           | 0.20      | 0.30      | 2.00-4.00 |           | 4.00-5.50 | 9.00-11.00  |      | 1.50      | 0.25      |      | 110                                | 68        | 10       | HR50        | aircraft parts, bolts, nuts, ship propellers, faucets    |
| AMS 4590-C63020**    | Nickel Aluminum Bronze                | Rem.                | 0.03      | 0.25      | 0.30      | 4.00-5.50 |           | 4.20-6.00 | 10.00-11.00 | 0.20 | 1.50      | 0.15      |      | 135                                | 100       | 6        | TQ50        | bushings, bearings, wear plates, dies, valve balls       |
| C64200*              | Aluminum Bronze                       | Rem.                | 0.05      | 0.20      | 0.50      | 0.30      |           | 0.25      | 6.30-7.60   |      | 0.10      | 1.50-2.20 | 0.15 | 85                                 | 45        | 12       | HR50        | valve guides, nuts, pole line hardware, bolts, gears     |
| C65100               | Low-Silicon Bronze B                  | Rem.                | 0.05      |           | 1.50      | 0.80      |           |           |             |      | 0.70      | 0.80-2.00 |      | 65                                 | 35        | 8        | H02         | conduit, electric motors, bolts, nuts, marine hardware   |
| C67300*              | Manganese Bronze                      | 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 |      | 65                                 | 40        | 12       | H02         | fasteners, bearings, pump parts, bushings, idler pins    |

\*standard-stocked alloys

<sup>1</sup>Cr% 0.05

<sup>1</sup>rod, 1/2" diameter and under

<sup>2</sup>(nickel-bearing)

Single values within Chemical Properties represent maximums.



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