

Aluminium Nickel Bronze



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| Grade | Specification | Cu (%) | Al (%) | Ni (%) | Fe (%) | Mn (%) | Si (%) | Sn (%) | Zn (%) | Pb (%) | Co (%) | Ultimate Tensile Strength (ksi) | Yield Strength (ksi) | Elong (4D%) | Hardness (HB) |
|--------------------------------|---|----------|-------------|-----------|-----------|--------|--------|--------|--------|--------|--------|---------------------------------|------------------------|-------------|---------------|
| UNS C63000 | AMS 4640 ASTM B124, B150 QQ-C-465 | Bal | 9.0 - 11.0 | 4.0 - 5.5 | 2.0 - 4.0 | 1.5 | 0.20 | 0.20 | 0.30 | - | - | 100 - 110 | 50 - 68 | 10 | 187 - 248 |
| UNS C63020 | AMS 4590 ASTM B150 | min 74.5 | 10.0 - 11.0 | 4.2 - 6.0 | 4.0 - 5.5 | 1.5 | - | 0.25 | 0.30 | 0.03 | 0.20 | 130 - 135 | 90 - 100 | 6 | min 260 |
| UNS C63200 | DTD197A CuAl10Ni5Fe5 BS 1400 AB2 | 80.0 | 10.0 | 5.0 | 4.7 | 0.3 | - | - | - | - | - | 92.4 - 116.8 | 35.5 - 76.9 | 10 - 17 | 179 - 240 |
| UNS C95510 | AMS 4880 CuAl11Fe6Ni6 ASTM B505, B271 | min 78.0 | 9.7 - 10.9 | 4.5 - 5.5 | 2.0 - 3.5 | 1.5 | - | 0.20 | 0.30 | - | - | 105 | 62.5 | 9 | 192 - 248 |
| UNS C95520 | AMS 4881 CuAl10Fe5Ni5-B ASTM B505, B271 | min 74.5 | 10.5 - 11.5 | 4.2 - 6.0 | 4.0 - 5.5 | 1.5 | 0.15 | 0.25 | 0.30 | 0.03 | 0.20 | 125 - 130 | 95 | 2-3 | - |
| UA11N | CuAl11Ni5Fe5 NFL14-706 BS B23, CA104 | 77.8 | 10.7 | 5.3 | 5.3 | 0.9 | - | - | - | - | - | 107 - 123 | 56.5 - 72.5 | 10 - 20 | 200 - 250 |
| UZ19A6 (High Tensile Brass) | CuZn19Al6 NFL14-707 | Bal | 6.5 | - | 3.0 | 5.5 | - | - | 18.50 | - | - | 120.4 < Dia 2" | 85.6 < Dia 2" | 10 | 225 |
| | | | | | | | | | | | | 113.1 Dia 2" & above | 78.3 Dia 2" & above | 7 | |

Aluminium Bronzes compared to other Bronze alloys:

- Higher strength
- Corrosion resistance
- Tarnish-resistant
- Prevent colonization by marine organisms
- Low oxidation rates at high temperatures

Applications:

- Plain bearings
- Underwater fastenings
- Aerospace landing gears components
- Oil & petrochemical industries
- Engine components for seagoing ships



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