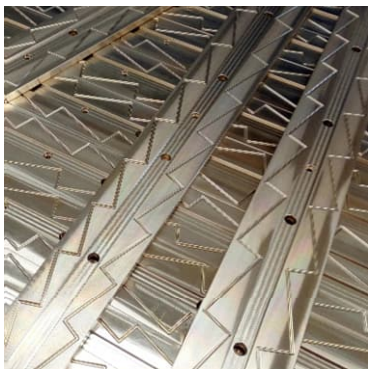
# Technical Data Sheet

# AMPCO® 8

AMPCO® 8 has exceptional properties and specifications that make it an outstanding aluminum bronze alloy. This high-strength alloy combines exceptional corrosion resistance with a remarkable balance of hardness and ductility, making it an ideal choice for demanding industrial applications. Its fine grain structure further enhances its physical properties.

## Key Features:

- Food certified by ISEGA
- Good sliding properties
- High ductility
- Best corrosion resistance of all AMPCO® alloys
- High impact & fatigue strength
- Compact grain structure
- Excellent bearing characteristics
- No nickel contamination & no galling against stainless steel
- Easily sheared, bent, or deep drawn on standard equipment

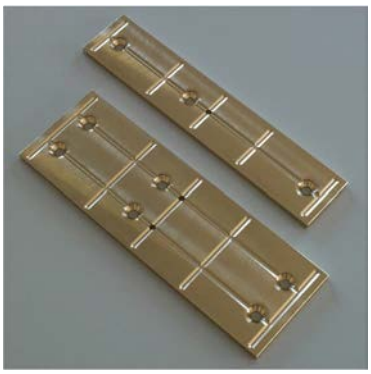


## Nominal Composition:

| Copper (Cu) | Aluminum (Al) | Iron (Fe) | Tin (Sn) | Others |
|---|---|---|---|---|
| Balance | 6.5% | 2.5% | 0.25% | max. 0.5% |

## Applications:

- Wear strips & wear plates
- Axial bearings & thrust washers
- Pipes, tubes, joints & connectors
- Bushings & bearings
- Applications in corrosive environments
- Used in marine, chemical, process & manufacturing industries



AMPCO® 8 finds versatile applications in various industries due to its outstanding properties. This high-strength aluminum bronze alloy is the first choice for components and parts where resistance to corrosion, erosion, abrasion, and cavitation pitting is paramount. Whether it's protecting against harsh marine environments or enhancing industrial machinery, AMPCO® 8 is a reliable and essential material for a wide range of demanding industrial needs.

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| Mechanical Properties (Nominal values) | Rolled | | | | Extruded | | | |
|---|---|---|---|---|---|---|---|---|
| | ≤ 0.25” | - 0.5” | - 2” | - 3” | ≤ 0.5” | - 1” | - 2” | - 3” |
| Tensile Strength $R_m$ (ksi) | 80 | 78 | 76 | 70 | 85 | 82 | 80 | 75 |
| Yield Strength $R_{p\,0.5}$ (ksi) | 41 | 36 | 34 | 31 | 56 | 52 | 47 | 41 |
| Elongation 2” (%) | 40 | 40 | 42 | 40 | 35 | 35 | 35 | 35 |
| Brinell Hardness (10/3000) | 153 | 149 | 143 | 140 | 187 | 183 | 174 | 163 |
| Rockwell Hardness (HRB) | 82 | 81 | 79 | 78 | 91 | 90 | 88 | 85 |
| Compressive Strength $R_{mc}$ (ksi) | 125 | 120 | 110 | 100 | 135 | 130 | 125 | 120 |
| Compressive Strength $R_{pc0.1}$ (ksi) | - | - | 36 | - | - | 47 | - | - |
| Shear Strength $R_{cm}$ (ksi) | 52 | 50 | 45 | 42 | 48 | 45 | 40 | 40 |
| Modulus of Elasticity E (ksi) | 18000 | | | | 18000 | | | |
| Charpy $a_k$ (ft·lbs) | 45 | 45 | 45 | 40 | 30 | 34 | 40 | 40 |
| Izod $a_k$ (ft·lbs) | 65 | 65 | 65 | 60 | 45 | 50 | 55 | 55 |
| Fatigue (100 million cycles) $\sigma_N$ (ksi) | 26 | 26 | 25 | 21 | - | - | - | - |

## Physical Properties:

| Density ρ (lbs/in³) | Coefficient of Expansion α (in/in/°F) | Thermal Conductivity λ (W/m·K) | Electrical Conductivity (% I.A.C.S.) | Specific Heat $c_p$ (BTU/lb·°F) |
|---|---|---|---|---|
| 0.287 | $9.05 \cdot 10^{-6}$ | 54 | 12 | 0.1 |

## Machining Parameters:

| Operation | Cutting Speed $v_c$ (m/min) | Feed f (mm/rev) | Depth a (mm) | Tool Specification |
|---|---|---|---|---|
| Milling – Roughing | 110 - 160 | 0.1 - 0.4 | up to 4 | K10 - K20 |
| Milling – Finishing | 90 - 115 | 0.05 - 0.1 | 0.1 - 0.5 | K10 - K20 |
| Turning – Roughing | 150 - 200 | 0.1 - 0.2 | up to 2 | K10 - K20 |
| Turning – Finishing | 180 - 250 | 0.05 - 0.1 | 0.1 - 0.2 | K10 - K20 |

Scan the QR Code to view our machining recommendations:

**Contact us**