

H62 Brass (Chinese Standard)

Overview

H62 brass is a copper-zinc alloy with approximately 62% copper and 38% zinc. It is classified as an alpha-beta brass, containing both the alpha and beta phases of the Cu-Zn solid solution. This dual-phase microstructure provides a balance of strength, ductility, and corrosion resistance. H62 is one of the most commonly used brass alloys in China and offers excellent mechanical properties suitable for various industrial applications.

Chemical Composition

| Element | Content (%) |
|-------------|-----------------|
| Copper (Cu) | 60.5 - 63.5 |
| Zinc (Zn) | Balance (36-38) |
| Lead (Pb) | ≤ 0.08 |
| Iron (Fe) | ≤ 0.15 |
| Impurities | ≤ 0.5 |

Mechanical Properties

- Tensile Strength: 300-420 MPa
- Yield Strength: 260-300 MPa
- Elongation: 10-15%
- Hardness: 100-140 VHN (60-80 HRB)
- Density: 8.4-8.5 g/cm³
- Thermal Conductivity: 120-150 W/(m·K)
- Electrical Conductivity: ~27% IACS

Physical Characteristics

- Good mechanical properties in both hot and cold conditions
- Excellent plasticity for cold working (bending, drawing, stamping)
- Easy to machine, braze, and weld
- Good corrosion resistance
- May be susceptible to stress corrosion cracking

Applications

- Radiator fins and heat exchangers
- Plumbing fittings and faucets
- Decorative hardware and ornaments

- Electrical connectors and terminals
- Marine and coastal applications
- Pins, nuts, washers
- Sugar industry and paper industry equipment

International Equivalents

- JIS: C2801 (H3250)
- DIN: CuZn37
- EN: CW508L
- ASTM: C27400