

## Brass

# Ms64b (C27000)

### Material Designation\*

|     |                   |
|-----|-------------------|
| UNS | C27000            |
| EN  | CuZn36 (CW 507 L) |
| JIS | C2700             |
| GB  | H65               |

### Chemical Composition

|    |           |   |
|----|-----------|---|
| Cu | 63.0-68.5 | % |
| Zn | Balance   | % |



### Characteristics

It has good mechanical properties, good plasticity in hot and cold conditions, good cuttability and strong corrosion resistance. It is easy to be brazed and welded.

### Typical Applications

It is suitable for a variety of deep drawing and bending of stressed parts, such as hardwares (screws, nuts, connectors), springs, guidelines, screen, paper pipe and mechanical parts.

### Physical Properties

|  |      |                     |
|--|------|---------------------|
| Density <sup>①</sup>                           | 8.4  | kg/dm <sup>3</sup>  |
| Electrical conductivity <sup>①</sup>           | 26   | %IACS               |
| Thermal conductivity <sup>①</sup>              | 121  | W/(m·K)             |
| Coefficiency of thermal expansion <sup>②</sup> | 22.2 | 10 <sup>-6</sup> /K |
| Modulus of elasticity                          | 110  | GPa                 |

Note①: Temperature for testing is 20°C.

Note②: Temperature range for testing is 20-300°C.

### Fabrication Properties

|                                    |           |
|------------------------------------|-----------|
| Cold workability                   | Excellent |
| Hot workability                    | Poor      |
| Brazing                            | Excellent |
| Machinability compared with C36000 | 30%       |

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## Mechanical Properties

| Diameter    | Temper | Tensile Strength | Yield Strength | Elongation |
|-------------|--------|------------------|----------------|------------|
| mm          |        | MPa min.         | MPa min.       | % min.     |
| 3 < Φ ≤ 12  | H02    | 380              | 260            | 10         |
| 12 < Φ ≤ 18 | H02    | 360              | 240            | 15         |
| 25 < Φ ≤ 50 | H02    | --               | --             | --         |
| 50 < Φ ≤ 80 | H02    | --               | --             | --         |
| 3 < Φ ≤ 12  | H04    | 540              | 420            | --         |
| 12 < Φ ≤ 18 | H04    | 440              | 320            | --         |
| 25 < Φ ≤ 50 | H04    | --               | --             | --         |

## Tolerance and Delivery Form

| Diameter       | Standard coil weights | Tolerance <sup>③</sup> | Coil ID       |
|----------------|-----------------------|------------------------|---------------|
| mm             | kg                    | mm                     | mm            |
| 0.1 < Φ ≤ 0.3  | 1-5                   | 0.01                   | Spool packing |
| 0.5 < Φ ≤ 0.8  | 5-12                  | 0.01                   | 160-200       |
| 0.8 < Φ ≤ 1.1  | 15-25                 | 0.02                   | 270-300       |
| 1.1 < Φ ≤ 1.6  | 18-30                 | 0.02                   | 260-300       |
| 1.6 < Φ ≤ 2.5  | 25-40                 | 0.03                   | 320-350       |
| 2.5 < Φ ≤ 4.0  | 30-45                 | 0.03                   | 370-400       |
| 4.0 < Φ ≤ 6.5  | 45-60                 | 0.04                   | 370-400       |
| 6.5 < Φ ≤ 10.0 | 200-400               | 0.04                   | 1000-1200     |
| 8.0 < Φ ≤ 12.0 | 200-400               | 0.05                   | 1200-1400     |

Note<sup>③</sup>: The tolerances listed in the table are specified as all plus or all minus. When tolerances are specified as plus and minus (±), half the values given.

\*Composition UNS  
 Conductivity UNS  
 Mechanical Properties For reference only, measured at room temperature, 68°F(20°C).  
 Fabrication Properties UNS, Machinability for reference only.  
 Other Physical Properties For reference only

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