

CuZn37Pb2

CuZn37Pb2 | C35300

The CuZn37Pb2 alloy offers excellent machinability properties. Furthermore, its high copper content makes it suitable for both cold and hot working processes.

| Comparable Standarts | |
|----------------------|--------|
| EN | UNS |
| CW606N | C35300 |

| Chemical Composition % | | | | | | |
|------------------------|-----|---------|---------|---------|---------|----------|
| Cu | Zn | Ni | Sn | Fe | Pb | Al |
| 61-62 | rem | 0.3 max | 0.2 max | 0.2 max | 1.6-2.5 | 0.05 max |

| Physical Properties | | |
|-------------------------|---------|----------|
| Density | 8.45 | (g/cm³) |
| Melting Point | 885-910 | [°C] |
| Thermal Conductivity | 105 | (W/mK) |
| Electrical Conductivity | ≥24 | %IACS |
| Modules of Elasticity | | [GPa] |
| α @ 20°C | 20.4 | [10-6/K] |

Note: The specified conductivity applies to the soft condition only.

Cp specific heat

α thermal expansion coefficient

| Fabrication Properties | |
|------------------------|-----------|
| Machinability | good |
| Soft Soldering | excellent |
| Cold Formability | fair |
| Hot Formability | excellent |
| Gas shield arc welding | poor |
| Resistance welding | fair |
| Brazing | fair |
| Gas shield arc welding | poor |

| | |
|---|---|
| Typcial Uses Watches and watch components, precision mechanical components, and milling plates, key production. | Corrosion Resistance Machined brass is generally highly resistant to organic substances, as well as neutral or alkaline compounds. However, it is susceptible to stress corrosion cracking, particularly in an ammonia-containing atmosphere and under mechanical stress. Dezincification in warm, acidic waters must also be taken into account. |
|---|---|

| Mechanical Properties | | | | |
|-----------------------|------------------------|----------------------|--------------------|-----------------|
| | Tensile Strength [MPa] | Yield Strangth [MPa] | Elongation A50 [%] | Hardness HV [-] |
| R290 | 290-370 | ≤ 200 | ≥ 30 | 60-110 |
| R370 | 370-440 | ≥ 200 | ≥ 12 | 110-140 |
| R440 | 440-540 | ≥ 370 | - | 140-170 |
| R540 | ≥ 540 | ≥ 540 | - | ≥170 |

Other tempers are available upon request.

$r = x * t$ (thickness $t \leq 0.5\text{mm}$)

GW bend axis transverse to rolling direction. BW bend axis parallel to rolling direction.