

C26800

CuZn33

Alloy Designation

| | |
|------------------|--------|
| EN | CuZn33 |
| DIN CEN/TS 13388 | CW506L |
| UNS | C26800 |

Chemical Composition (Balance)

Weight percentage

| | | |
|----|------|---|
| Cu | 67 | % |
| Zn | Rest | % |

Characteristics

CuZn33 combines excellent cold forming properties with good mechanical strength. CuZn30 has good hot forming properties and excellent soldering and brazing properties. Due to the outstanding deep drawing properties CuZn30 called "deep-draw" or "cartridge" brass.

Main Applications

Metal goods, Deep drawn parts, Components for the electrical industry, stamped parts, Connectors.

Mechanical Properties (EN 1652)

| Temper | Tensile Strength | Yield Strength Minimum | Elongation Minimum | Hardness HV * | Bending 90° | |
|--------|------------------|------------------------|--------------------|------------------|-------------------------------|-----|
| | Rm | Rp _{0.2} | A _{50mm} | | gw rel. Bending Radius R/T | bw |
| | MPa | MPa | % | HV | Strip Thickness ≤ 0.50mm | |
| R280 | 280 .. 380 | ≤ 170 * | 44 | 55 .. 95 | 0 | 0 |
| R350 | 350 .. 430 | 170 * | 23 | 95 .. 125 | 0 | 0 |
| R420 | 420 .. 500 | 300 * | 6 | 125 .. 155 | 0 | 0 |
| R500 | ≥ 500 | 450 * | 3 | ≥ 155 | 0,5 | 0,5 |

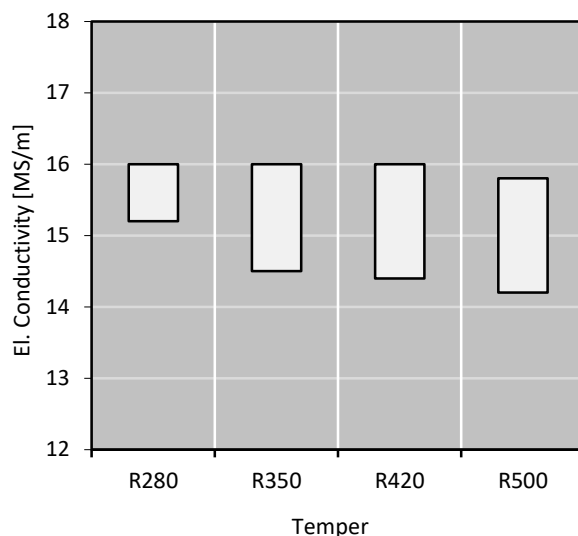
* only for information

Physical Properties

Typical values in annealed temper at 20 °C

| | | | |
|----------------------------------------------|---------------|-------|---------------------|
| Density | | 8.47 | g/cm ³ |
| Thermal expansion coefficient | 20 .. 300 °C | 19.9 | 10 ⁻⁶ /K |
| Specific heat capacity | | 0.377 | J/(g·K) |
| Thermal conductivity | | 121 | W/(m·K) |
| Electrical conductivity | MS/m | 15 | MS/m |
| Electrical conductivity | IACS | 26 | % |
| Thermal coefficient of electrical resistance | (0 .. 100 °C) | 1.6 | 10 ⁻³ /K |
| Modulus of elasticity | GPa | 112 | GPa |

Electrical Conductivity



Fabrication Properties *

| | |
|---------------------------|---------------|
| Cold Forming Properties | Excellent |
| Machinability (Rating 20) | Less suitable |
| Electroplating Properties | Excellent |
| Hot Tinning Properties | Excellent |
| Soft Soldering, Brazing | Excellent |
| Resistance Welding | Good |
| Gas Shielded Arc Welding | Fair |
| Laser Welding | Less suitable |

* For more details call our technical service

Corrosion Resistance *

CuZn33 has a good resistance to water, water vapour, different saline solutions, many organic liquids. Industrial-, maritime- and country air.

CuSn33 in cold formed temper, as well as under internal and external tension, tends to stress corrosion cracking, when in contact with e.g. hydrous ammonia, ammoniac salt or amine and others.

Trough a heat-treatment of semi-finished or finished products the risk of stress corrosion can be reduced.

Not resistant to: Acids, hydrous sulphur components, hydrous ammonia (stress corrosion cracking) in non-stress-relieved condition.



Bend Fatigue (at room temperature)

The fatigue strength gives an indication about the resistance to variations in applied tension. It is measured under symmetrical alternating load. The maximum bending load for 10^7 load cycles without crack is measured. Dependent on the temper class it is approximately 1/3 of the tensile strength R_m .

Available delivery forms *

- Strips in coils
- Traverse-wound coils with drum weights up to 1.5 t
- TECSTRIP®_multicoil up to 2.5 t
- Hot-Dip-Tinned strips in thickness range 0.10 up to 1.20 mm

* For more details call our sales service

Due to continued improvements within our production process, the details stated in our brochure can not be guaranteed. We reserve the right to update or amend our products, without prior notification. We suggest that you obtain confirmation of our product details / specifications prior to committing to specific alloys.