

Aluminiumbronze | Round Bars

DATA SHEET



| | |
|------------------------------|---|
| Alloy | Cu Al10 Ni5 Fe4, CW307G |
| Method of Manufacture | extruded & drawn |
| Specification | EN 12163 |
| Tolerance | DIN 1756, h11 |
| | Ø 8-10 mm +0/-0.09 mm Ø 11-18 mm +0/-0.11 mm Ø 19-30 mm +0/-0.13 mm Ø 31-50 mm +0/-0.16 mm Ø 51-70 mm +0/-0.19 mm |
| Temper | R740S, therm. stress relieved |
| Machinability | moderate, similar to steel of same hardness |
| Hot Working | good |
| Cold Working | not good, only after soft annealing |
| Corrosion Resistance | very good versus most media, incl. sea water |
| REACH | no obligations |
| RoHS | conformal |

Mechanical Properties

| | Tensile strength R_m | Yield stress $R_{p0.2}$ | Elongation A | Hardness HB |
|-------------|---------------------------|----------------------------|-----------------|----------------|
| M | as obtained | | | |
| R680 | ≥ 680 N/mm ² | ≥ 320 N/mm ² | ≥ 10 % | |
| H170 | | | | 170-210 |
| R740 | ≥ 740 N/mm ² | ≥ 400 N/mm ² | ≥ 8 % | |
| H200 | | | | ≥ 200 |

Chemical Composition

| | |
|-------------------|------------|
| Cu | Rest |
| Al | 8.5-11.0 % |
| Ni | 4.0-6.0 % |
| Fe | 3.0-5.0 % |
| Impurities, max.: | |
| Mn | 1.0 % |
| Pb | 0.05 % |
| Si | 0.2 % |
| Sn | 0.1 % |
| Zn | 0.4 % |
| other | 0.2 % |

High strength even at higher temperatures up to approx. 400°C.
 High fatigue strength even when exposed to corrosion. Resistant to neutral and acid, watery media as well as seawater. Good resistance to scaling, erosion and cavitation. Very high wear resistance. Good sliding properties in conjunction with mating material with hard surfaces and perfect lubrication. Plates for condenser and heat exchanger sheets. Shafts, screws, wear parts, control parts for hydraulics, high-pressure steam fittings. Mechanically and chemically stressed parts in mechanical engineering, shipbuilding and mining.

Comparable Specifications

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|-------------------------------------|
| Cu Al10 Ni5 Fe4, 2.0966, DIN 17 665 |
| C 63 200, C 63 000 UNS |
| CA104, BS 2872, 2874, 2875 |