

|   |                                 |   |                                   |  |                                  |                                 |                    |   |                 |                 |                  |
|---|---------------------------------|---|-----------------------------------|--|----------------------------------|---------------------------------|--------------------|---|-----------------|-----------------|------------------|
| <b>Data sheet</b><br><br><b>CW307G</b><br><b>CuAl10Ni5Fe4</b><br><br><b>Alumeco A/S</b>   |                                 |   |                                   | <b>Internal alloy name:</b> CW307G<br><b>Nominal composition:</b> CuAl10Ni5Fe4<br><b>DIN-Werkstoff no.:</b> -<br><b>Alloy type:</b> Aluminium Bronze<br><b>Revision date:</b> 12-01-2021 |                                  |                                 |                    |   |                 |                 |                  |
| <b>Main usage</b><br><ul style="list-style-type: none"> <li>• Marine</li> <li>• Seawater acid</li> <li>• Any applications where extreme corrosion resistance is required</li> <li>• Valve parts</li> <li>• Pump parts</li> <li>• Tools</li> </ul> |                                 | <b>Main properties</b><br><ul style="list-style-type: none"> <li>• High Strength</li> <li>• Very good atmospheric corrosion resistance</li> </ul> |                                   | <b>Important norms and literature</b><br><br>EN12163 Copper and copper alloys. Rod for general purposes  |                                  |                                 |                    | EN12165 Copper and copper alloys. Wrought and unwrought forging stock |                 |                 |                  |
| <b>Chemical composition (%) DIN/EN 12163 &amp; EN 12163</b>   |                                 |   |                                   |  |                                  |                                 |                    |   |                 |                 |                  |
| <b>Al</b>   | <b>Cu</b>                       | <b>Fe<sup>a</sup></b>   | <b>Mn</b>                         | <b>Ni<sup>a</sup></b>  | <b>Bi</b>                        | <b>Cr</b>                       | <b>Mg</b>          | <b>Pb</b>   | <b>Si</b>       | <b>Sn</b>       | <b>Zn</b>        |
| 8,5<br>—<br>10,5  | 76,0<br>—<br>83,0               | 4,0<br>—<br>5,5   | Max.<br><br>3,0                   | 4,0<br>—<br>6,0  | Max.<br><br>0,01                 | Max.<br><br>0,05                | Max.<br><br>0,05   | Max.<br><br>0,03  | Max.<br><br>0,1 | Max.<br><br>0,1 | Max.<br><br>0,50 |
| <small>a) For permanent mould castings, the minimum iron content of ingots and castings shall be 3,0% and the minimum nickel content shall be 3,7%</small>  |                                 |   |                                   |  |                                  |                                 |                    |   |                 |                 |                  |
| <b>Mechanical properties DIN/EN 12163 &amp; EN 12163</b>  |                                 |   |                                   |  |                                  |                                 |                    |   |                 |                 |                  |
| <b>Casting process and designation</b>  |                                 | <b>Tensile Strength<br/>R<sub>m</sub><br/>N/mm<sup>2</sup></b>  |                                   | <b>0,2% proof strength<br/>Rp<sub>0,2</sub><br/>N/mm<sup>2</sup></b>   |                                  | <b>Elongation<br/>A<br/>%</b>   |                    | <b>Brinell Hardness**<br/>HBW</b>                                     |                 |                 |                  |
|   |                                 | <b>Min.</b>   |                                   | <b>Min.</b>  |                                  | <b>Min.</b>                     |                    | <b>Min.</b>   |                 |                 |                  |
| Continuous<br>GC  |                                 | 650   |                                   | 280  |                                  | 13                              |                    | 150   |                 |                 |                  |
| Centrifugal<br>GZ   |                                 | 650   |                                   | 280  |                                  | 13                              |                    | 150   |                 |                 |                  |
| <small>** Information values only</small>   |                                 |   |                                   |  |                                  |                                 |                    |   |                 |                 |                  |
| <b>Physical properties</b>  |                                 |   |                                   |  |                                  |                                 |                    |   |                 |                 |                  |
| <b>Density<br/>(20 °C)</b>  | <b>Solidification<br/>range</b> | <b>Electrical<br/>conductivity</b>  | <b>Thermal<br/>conductivity</b>   | <b>Thermal<br/>expansion<br/>(20-300 °C)</b>   | <b>Annealing<br/>temperature</b> |                                 | <b>E - modulus</b> |   |                 |                 |                  |
| g cm <sup>-3</sup>  | °C                              | %IACS   | W m <sup>-1</sup> K <sup>-1</sup> | µm m <sup>-1</sup> K <sup>-1</sup>   | °C                               |                                 | N mm <sup>-2</sup> |   |                 |                 |                  |
| 7,6   | 1050-1080                       | 7,5   | 38                                | 17   | -                                |                                 | 124,000            |   |                 |                 |                  |
| <b>Properties and information</b>   |                                 |   |                                   |  |                                  |                                 |                    |   |                 |                 |                  |
| <b>Fabrication Properties</b>   |                                 |   |                                   |  |                                  | <b>Joining Methods</b>          |                    |   |                 |                 |                  |
| <b>Hot Formability</b>  |                                 | <b>Not Recommended</b>  |                                   |  |                                  | <b>Soldering</b>                |                    | <b>Good</b>   |                 |                 |                  |
| <b>Cold Formability</b>   |                                 | <b>Not Recommended</b>  |                                   |  |                                  | <b>Brazing</b>                  |                    | <b>Fair</b>   |                 |                 |                  |
|   |                                 |   |                                   |  |                                  | <b>Oxy-acetylene welding</b>    |                    | <b>Good</b>   |                 |                 |                  |
|   |                                 |   |                                   |  |                                  | <b>Gas-shielded arc welding</b> |                    | <b>Good</b>   |                 |                 |                  |