



30 <b>Zn</b> Zinc 65.409	13 <b>Al</b> Aluminium 26.981	29 <b>Cu</b> Copper 63.546
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## ZINC ALLOY ZnAl4Cu1

**Producer:** NFM-CRAMET N.V. • B-9770 Kruishoutem

**Producer's mark:**

**Colour code:**  white/black

### 1) ZINC ALLOY according to EN1774: 1997 – Standard for foundry purposes, ingot and liquid

- Alloy symbol: ZnAl4Cu1
- Alloy number: ZL0410
- Short designation: ZL5

Chemical composition of alloy ingot and liquid (in % mass fraction):

Al Aluminium	Cu Copper	Mg Magnesium	Fe Iron	Pb Lead	Cd Cadmium	Sn Tin	Ni Nickel	Si Silicon	Zn Zinc
3.8 4.2	0.7 1.1	0.035 0.06	0.020 max.	0.003 max.	0.003 max.	0.001 max.	0.001 max.	0.02 max.	balance

### 2) ZINC ALLOY according to EN12844: 1998 – Standard for castings

- Alloy number: ZP0410
- Short designation: ZP5

Chemical composition of castings (in % mass fraction):

Al Aluminium	Cu Copper	Mg Magnesium	Fe Iron	Pb Lead	Cd Cadmium	Sn Tin	Ni Nickel	Si Silicon	Zn Zinc
3.7 4.3	0.7 1.2	0.025 0.06	0.05 max.	0.005 max.	0.005 max.	0.002 max.	0.02 max.	0.03 max.	balance

### 3) PHYSICAL AND MECHANICAL PROPERTIES AT 20 °C:

guidance mid-range data for pressure die castings

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| <ul style="list-style-type: none"> <li>• Tensile strength: 330 MPa</li> <li>• Elongation A (50 mm): 5%</li> <li>• Brinell Hardness HBS 500-10-30: 92</li> <li>• Impact energy (unnotched 6.3 x 6.3 mm bar): 58 J</li> <li>• Youngs modulus: 85 GPa</li> <li>• 0.2% Yield strength: 250 MPa</li> <li>• Fatigue strenght (10<sup>8</sup> cycles): 56 MPa</li> </ul> | <ul style="list-style-type: none"> <li>• Creep stress for 0.5% elongation (3000h): 100 MPa</li> <li>• Density: 6.7 kg/dm<sup>3</sup></li> <li>• Melting range: 379 to 388 °C</li> <li>• Coefficient of thermal expansion: 27 µm/(m·K)</li> <li>• Thermal conductivity (18 °C): 110 W/(m·K)</li> <li>• Electrical conductivity (10 °C): 26% IACS</li> </ul> |
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**Remarks:** 1 MPa equivalent to 1 N/mm<sup>2</sup>  
 1 GPa equivalent to 1 kN/mm<sup>2</sup>  
 100% IACS equivalent to 58S·m/mm<sup>2</sup>