



|                                   |               |  |         |                                     |               |
|-----------------------------------|---------------|--|---------|-------------------------------------|---------------|
| 30<br><b>Zn</b><br>Zinc<br>65.409 | 28<br>18<br>2 | 13<br><b>Al</b><br>Aluminium<br>26.981 | 28<br>3 | 29<br><b>Cu</b><br>Copper<br>63.546 | 28<br>18<br>1 |
|-----------------------------------|---------------|--|---------|-------------------------------------|---------------|

## ZINC ALLOY ZnAl27Cu2

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

**Producer's mark:**

**Colour code:** ■ white/violet

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

- Alloy symbol: ZnAl27Cu2
- Alloy number: ZL2720
- Short designation: ZL27

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

| Al<br>Aluminium | Cu<br>Copper | Mg<br>Magnesium | Fe<br>Iron   | Pb<br>Lead    | Cd<br>Cadmium | Sn<br>Tin     | Ni<br>Nickel | Si<br>Silicon | Zn<br>Zinc |
|-----------------|--------------|-----------------|--------------|---------------|---------------|---------------|--------------|---------------|------------|
| 25.5<br>28.0    | 2.0<br>2.5   | 0.012<br>0.02   | 0.07<br>max. | 0.005<br>max. | 0.005<br>max. | 0.002<br>max. | –            | 0,07<br>max.  | balance    |

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

- Alloy number: ZP2720
- Short designation: ZP27

Chemical composition of castings (in % mass fraction):

| Al<br>Aluminium | Cu<br>Copper | Mg<br>Magnesium | Fe<br>Iron  | Pb<br>Lead    | Cd<br>Cadmium | Sn<br>Tin     | Ni<br>Nickel | Si<br>Silicon | Zn<br>Zinc |
|-----------------|--------------|-----------------|-------------|---------------|---------------|---------------|--------------|---------------|------------|
| 25.0<br>28.0    | 2.0<br>2.5   | 0.01<br>0.02    | 0.1<br>max. | 0.006<br>max. | 0.006<br>max. | 0.003<br>max. | 0.02<br>max. | 0.08<br>max.  | balance    |

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

guidance mid-range data for pressure die castings

- Tensile strength: 425 MPa
- Elongation A (50 mm): 2.5%
- Brinell Hardness HBS 500-10-30: 120
- Impact energy (unnotched 6,3 x 6,3 mm bar): 10J
- Youngs modulus: 78GPa
- 0.2% Yield strength: 370 MPa
- Fatigue strenght (10<sup>8</sup> cycles): 145 MPa
- Creep stress for 0,5% elongation(3000h): 100 MPa
- Density: 5 kg/dm<sup>3</sup>
- Melting range: 377 to 484 °C
- Coefficient of thermal expansion: 26 µm/(m-K)
- Thermal conductivity (18 °C): 126 W/(m-K)
- Electrical conductivity (10 °C): 30% IACS

**Remarks:** 1 MPa equivalent to 1 N/mm<sup>2</sup>  
 1 GPa equivalent to 1kN/mm<sup>2</sup>  
 100% IACS equivalent to 58S-m/mm<sup>2</sup>