

MATERIAL DATASHEET  
**ALLOY 469**



Designation	
Diehl Brass Solutions	469
DIN EN symbol	CuZn31Si1
DIN EN	CW708R
UNS	C69800

Composition (mass as %, reference values)	
Cu	67.0
Si	1.0
Pb	0.2
Zn	remainder

**Application**

- Brass alloy with good wear resistance.
- Suitable for bearing bushings, valve guides and other sliding components.

**Products and relevant standards**

Rods (general purposes)	EN 12163
Seamless, round tubes (general purposes)	EN 12449

**Physical properties**

Density	g/cm <sup>3</sup>	8.4
Coefficient of linear thermal expansion: 20 – 200 °C	• 10 <sup>-6</sup> /K	19.2
Thermal conductivity	W/(m · K)	71.0
Young's modulus	GPa	108.0

**Processing properties**

Machinability (CuZn39Pb3 = 100%)	moderate (Index 40)
Hot formability	moderate
Cold formability	good

**Mechanical properties and hardness**

- The strength properties and hardness values are specified in the relevant product standards.
- The properties depend on the product, the condition and the dimensions.

**Heat treatment**

Soft annealing	500 – 600 °C	1 – 3 h
Stress relief annealing	200 – 380 °C	1 – 3 h

**Corrosion resistance**

Generally good resistance to neutral, alkaline and organic aqueous solutions.

**Diehl Brass Solutions Stiftung & Co. KG**

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