DIEHL
Metall Messing

MATERIAL DATASHEET

ALLOY 469

Designation	
Diehl Metall	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/cm³	8.4
Coefficient of linear thermal expansion: 20 – 200 °C	• 10^{-6}/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 Metall Stiftung & Co. KG
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