

MATERIAL DATASHEET
ALLOY 023



Designation	
Diehl Metall	023
DIN EN symbol	CuZn37
DIN EN	CW508L
UNS	C27400

Composition (mass as %, reference values)	
Cu	64.0
Zn	remainder

Application

- Main alloy for cold forming processes, such as deep drawing, pressing, upsetting, rolling, thread rolling, coining and bending.
- Good solderability and weldability.

Products and relevant standards

Rods (general purposes)	EN 12163
Profiles (general purposes)	EN 12167
Seamless, round tubes (general purposes)	EN 12449

Physical properties

Density	g/cm ³	8.44
Coefficient of linear thermal expansion: 20 – 200 °C		• 10 ⁻⁶ /K
		21.0

Processing properties

Machinability (CuZn39Pb3 = 100%)	not very suitable (Index 35)
Hot formability	not very suitable (750 – 850 °C)
Cold formability	very 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	450 – 550 °C	1 – 2 h
Stress relief annealing	250 – 300 °C	1 – 2 h

Corrosion resistance

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

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