

MATERIAL DATASHEET
ALLOY 205



Designation	
Diehl Metall	205
DIN EN symbol	CuZn36Pb3
DIN EN	CW603N
UNS	C35600 / C36000

Composition (mass as %, reference values)	
Cu	61.0
Pb	2.8
Zn	remainder

Application

- The alloy has good machinability and good cold formability. It is suitable for automated machining – for knurling and thread rolling processes.
- In the USA, this is the main alloy for automated machining.

Products and relevant standards

Rods (free machining purposes)	EN 12164
Hollow rods (free machining purposes)	EN 12168
Profiles (general purposes)	EN 12167

Physical properties

Density	g/cm ³	8.5
Coefficient of linear thermal expansion: 20 – 200 °C	• 10 ⁻⁶ /K	20.6

Processing properties

Machinability (CuZn39Pb3 = 100%)	very good (Index 90)
Hot formability	good
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	450 – 550 °C
Stress relief annealing	250 – 350 °C

Corrosion resistance

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

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