DIEHL
Brass Solutions

MATERIAL DATASHEET

ALLOY 401 (eZeeDZR)

Designation	
Diehl Brass Solutions	401 (eZeeDZR)
DIN EN symbol	CuZn35MgPAs
DIN EN	CW733R
UNS	tbd.

Composition (mass as %, reference values)	
Cu	63.5
Mg	0.2
P	0.25
As	0.1
Zn	remainder

ZERO LEAD
eZee dzr

Application

- Alloy with good cold formability as well as good solderability and weldability.
- The alloy can be used in drinking water installations.
- If the material is processed at temperatures above 600 °C, the dezincification resistance (in accordance with the EN ISO 6509 test procedure and the relevant product standards) is impaired. To ensure performance, suitable heat treatment must therefore be carried out to restore dezincification resistance. The annealing temperature for this lies at between 500 °C to 550 °C. For further information, please contact the manufacturer.

Products and relevant standards

Rods (free machining purposes)	EN 12164
Rods (forging stock)	EN 12165
Hollow rods (free machining purposes)	EN 12168
Profiles (general purposes)	EN 12167

Physical properties

Density		g/cm³	8.4
Electrical conductivity	at RT	MS/m	14.2
Thermal conductivity	at RT	W/mK	102

Processing properties

Machinability (CuZn39Pb3 = 100%)	good (Index 70-90)
Hot formability	moderate
Cold formability	good

Mechanical properties and hardness

- The strength properties and hardness values correspond to the alloy CuZn36Pb2As and 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 – 300 °C
Hot forming	680 – 750 °C

Corrosion resistance

- Generally good resistance to neutral, alkaline and organic aqueous solutions.
- Resistant to dezincification according to the EN ISO 6509 test procedure.

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