

MATERIAL DATASHEET
ALLOY 432 Pbf



Designation		Composition (mass as %, reference values)	
Diehl Metall	432 Pbf	Cu	76.0
DIN EN symbol	CuZn21Si3P	Si	3.0
DIN EN	CW724R (CC768S)	P	0.05
UNS	C69300 (C87850)	Zn	remainder

Application

- Lead-free material for producing fine-grained, high-strength and corrosion-resistant castings.
- For castings, the alloy designation CC768S or C87850 must be used. As the material undergoes a forming process at Diehl Metall, the alloy designation is CW724R or C69300.
- If processing operations are carried out at temperatures above 580 °C, the dezincification resistance is impaired. To ensure performance, it can be restored by means of suitable heat treatment.
- For further information, please contact the manufacturer.

Products and relevant standards

Rods (general purposes) EN 12163

Processing properties

Forming	
Castability	good
Machinability (CuZn39Pb3 = 100%)	very good
Cold formability	less suitable

Mechanical properties

Correspond to EN 12163, condition M

Physical properties

Density	g/cm ³	8.3
Coefficient of linear thermal expansion: 20 – 200 °C	• 10 ⁻⁶ /K	19.6
Thermal conductivity	W/(m · K)	28.0
RT	W/(m · K)	44.4
200 °C		
Specific thermal capacity	J/(g · K)	0.35
RT	J/(g · K)	0.41
200 °C		
Electrical conductivity	m/(Ω · mm ²)	5.3
Specific electrical resistance	(Ω · mm ²)/m	0.19
Young's modulus	GPa	106.0
Shear modulus	GPa	39.0
Poisson's ratio		0.32

Corrosion resistance

- Generally good resistance to neutral, alkaline and organic aqueous solutions.
- Dezincification-resistant according to the relevant test standards.

Diehl Metall Stiftung & Co. KG
Diehl Metall Messing

Heinrich-Diehl-Str. 9 | D-90552 Röthenbach a. d. Pegnitz | Phone +49 911 5704-0 | Email: sales-messing@diehl.com

www.diehl.com/metall

This material datasheet is for general information purposes only and is not subject to any revision service. Claims may not be derived from it unless there is evidence of intent or gross negligence. The data presented does not provide a warranty that the product is of a specific quality and does not replace any expert advice or customer trials.