

YAMATO GOKIN CO., LTD.

ALLOY DATA SHEET BeCu50 (BZF · BZD)

1. Characteristics

- Excellent heat-resisting property
- High electrical conductivity
- High hardness

2. Related Specifications

- RWMA Class 3
- JIS Z 3234

3. Applications

- Electrode for resistance welding
- Bearings
- Plunger tips for die-casting machines

4. Chemical Composition

Designation: BZF

(%)

Element	Be	Ni	Ag	Zr	Cu
Min	0.2	1.4	0.1	0.1	balance
Max	0.4	2.1	0.3	0.3	

5. Physical Properties

Density	g/cm ³	8.83
Young's modulus	N/mm ²	138,000
Coefficient of expansion 20 to 300° C	× 10 ⁻⁶ /° C	18
Thermal conductivity	W/m K	240
Electrical conductivity	IACS %	45

6. Available forms/Mechanical Properties

Size/condition	forms/process							Mechanical properties						Available forms																
	Bars			Tubes				Tensile strength	Yield strength 0.2% offset	Elongation	Hardness			Semi-finished products										parts						
	Extruded or forged	Drawn	Continuous casting	Extruded	Drawn	Continuous casting	Forgings				Mpa	Mpa	%	HB	HRB	HV	Rounds	Squares	Flats	Hexagones	Section	Tubes	Plates	Discs	Rings	Forged blanks	stamped	machined		
Bars φ ≤ 35mm	●	●						≥690	-	≥9	≥90				●	●	●						●	●						
Bars 40 ≤ φ ≤ 200mm	●			●															●							●	●			●
Plates 15 ≤ Thickness ≤ 100mm																								●						
																	●										●			

All information is intended as a guide to performance and application suitability.

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