Material data sheet

ALBROMET-W240

ALBROMET-W240	Highly conductive copper alloy, beryllium copper
Material properties	Precipitation-hardened copper alloy with excellent thermal and electrical conductivity; high mechanical strength and hardness, high softening temperature
Application examples	Injection moulding tools, plastic mould making, toolmaking, hot runner nozzles, die castings, die casting pistons, mould inserts, welding electrodes for resistance welding, electrode holders; energy technology, guide rails and sliding elements for applications involving high temperatures
Processing	In the precipitation-hardened state, it can be easily machined using carbide tools; EDM is possible; Due to the beryllium content, protective measures are required to prevent the formation of dust/vapours. Machine wet and ensure adequate cooling.
Typical analysis	<table><tr><td>Cu</td><td>Co</td><td>Ni</td><td>Be</td><td>Pb</td><td>Sonstige</td></tr><tr><td>Rest</td><td>0.8 - 2.5 %</td><td>< 1.3 %</td><td>0.4 - 0.7 %</td><td>< 0.02 %</td><td>< 0.5 %</td></tr></table>
Standards/Specifications	CuCo1Ni1Be / CuCo2Be ähnlich 2.1285 (DIN 17665 withdrawn, replaced by:) ~ CW103C / ~ CW104C (DIN EN 12163, DIN EN 12164, DIN EN 12167, DIN EN 12420) ~ C17510 / ~ C17500 (ASTM B441, ASTM B534); RWMA Class 3
Delivery formats	Plates, round bars, flat bars, square bars, cut to length pieces; finished parts according to drawings

Mechanical and physical properties	forged / extruded / pressed
Hardness Brinell (HBW 10/3000)	220 – 260
Hardness Vickers (HV10, converted)	230 - 275
Tensile strength R_m	650 - 900 MPa
Yield strength $R_{P0,2}$	> 500 MPa
Elongation at break A_5	> 8 %
Elasticity modulus E	135 GPa
Density	8.8 g/cm³
Mean linear coefficient of thermal expansion	17.2 10^{-6} /K
Thermal conductivity at 20° C	~ 240 W/m*K
Electrical conductivity at 20 °C	26 m/Ohm*mm²; 43 % I.A.C.S
Softening temperature	> 480 °C a significant change in strength values occur
Melting range	Solidus ~ 970 °C and Liquidus ~ 1050 °C

These data are based on information provided by our supplier, all changes reserved. The mechanical strength values are typical standard values and depend on the dimension and the production method (Status: 07/2026).

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