Material data sheet

ALBROMET-W130

ALBROMET-W130	High-strength copper alloy, beryllium copper
Material properties	Thermally treated beryllium copper alloy with extremely high hardness and strength, good electrical and thermal conductivity, excellent spring and fatigue properties, good corrosion resistance, and spark-free
Application examples	Moulds for metal casting, plastic mould making, injection moulding tools, mould cores, mould inserts, hot runner nozzles, clamps, holders, welding fixtures, electrodes for resistance and projection welding, non-magnetic components, spark-free tools; High-strength and corrosion-resistant components for marine engineering and aviation
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	Cu: Remaining; Be: 1.8 - 2.1 %; Ni: < 0.3 %; Co: < 0.3 %; Pb: < 0.02 %; Others: < 0.5 %
Standards/Specifications	CuBe2, 2.1247 (DIN 17665 withdrawn, replaced by:) CW101C (DIN EN 12163, DIN EN 12164, DIN EN 12420) C17200 (ASTM B196, ASTM B194), RWMA Class 4
Delivery formats	Plates, round bars, cut to length pieces; finished parts according to drawings

Mechanical and physical properties	forged / extruded / pressed
Hardness Brinell (HBW 10/3000)	340 – 390
Hardness Rockwell (HRC, converted)	37 - 42
Tensile strength R_m	1100 - 1300 MPa
Yield strength $R_{P0,2}$	> 1,000 MPa
Elongation at break A_5	> 3 %
Elasticity modulus E	135 GPa
Compressive strength	1,000 – 1,400 MPa
Density	8.4 g/cm^3
Mean linear coefficient of thermal expansion	17.0 10^{-6} /K
Thermal conductivity at 20° C	~ 130 W/m*K
Electrical conductivity at 20 °C	18 m/Ohm*mm²; 31 % I.A.C.S.
Softening temperature	> 300 °C a significant change in strength values occurs
Melting range	Solidus ~ 865 °C and Liquidus ~ 980 °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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