Material data sheet

ALBROMET-A220Ni

ALBROMET-A220Ni	Aluminum bronze
Material properties	Tough construction material with good sliding properties; insensitive to shock and impact; high corrosion resistance to neutral, basic, and aqueous acidic media as well as seawater; high resistance to cavitation; low permeability (close to 1 H)
Application examples	Drive components, impellers, gear wheels, thrust pieces, plain bearings with high static or dynamic loads, worm gears, valve guides, screws and nuts for corrosion applications, fittings; components in the chemical industry or used with seawater (marine)
Processing	Easy to machine, use of carbide tools recommended, good weldability (CuAl or NiAl-based filler materials), brazing possible, easy to polish
Typical analysis	<table><tr><td>Cu</td><td>Al</td><td>Fe</td><td>Ni</td><td>Mn</td><td>Cr</td><td>Pb</td><td>Others</td></tr><tr><td>Remaining</td><td>9-10.5 %</td><td>3-4 %</td><td>4-5.5 %</td><td>< 1.5 %</td><td>< 0.5 %</td><td>< 0.02 %</td><td>< 0.5 %</td></tr></table>
Standards/Specifications	CuAl10Ni5Fe4, 2.0966 (DIN 17665 withdrawn, replaced by:) CW307G (DIN EN 12163, DIN EN 12164, DIN EN 12167, DIN EN 12168, DIN EN 12420) CC333G (DIN EN 1982) C63000 / C63200 (ASTM B150, ASTM B124) / ~ C95500 (ASTM B505)
Delivery formats	Plates, round bars, flat bars, square bars, hollow bars, tubes, cut to length pieces; rings, finished parts according to drawings

Mechanical and physical properties	forged / extruded / pressed	continuous casting
Hardness Brinell (HBW 10/3000)	190 – 230	170 - 220
Hardness Vickers (HV10, converted)	200 - 240	180 - 230
Tensile strength R_m	700 - 900 MPa	650 - 800 MPa
Yield strength $R_{P0,2}$	> 380 MPa	> 360 MPa
Elongation at break A_5	> 12 %	> 12 %
Elasticity modulus E	127 GPa	
Compressive strength	1.000 MPa	
Density	7.7 g/cm^3	
Mean linear coefficient of thermal expansion	16.0 10^{-6}/K	
Thermal conductivity at 20° C	45 W/m*K	
Electrical conductivity at 20 °C	5.2 m/Ohm*mm^2; 9 % I.A.C.S	
Softening temperature	> 300 °C a significant change in strength values occurs	
Melting range	Solidus ~ 1020 °C and Liquidus ~ 1040 °C	
Magnetic permeability	1,07 H = 100 Oe	

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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