

High-quality aluminium bronze **a21**

1. Structure

Premium quality aluminium bronze **a21** forms coherent compact grain structure – achieved in unique forging technique – different from standard rough grain structure of typical bronze alloys.

2. Chemical Composition

Aluminium (Al) – 13,10%

Iron (Fe) – 4,40%

Other (max) – 2,50%

Copper (Cu) – balance

3. Chemical and physical properties

Parameter	Unit	Value
Tensile strength R_m	MPa	703
Relative elongation A_5	%	407
Compressive strength R_{mc}	MPa	1
Elastic limit – compression R_{pc}	MPa	1227
Shear strength – R_{mt}	MPa	414
Brinell hardness	HB	285
Elastic Young modulus E	MPa	$1,05 \cdot 10^5$
Density ρ	g / cm^3	7,2
Specific heat capacity c_p	$J / g \cdot K$	0,42
Coefficient of Thermal Expansion α	$10^{-6} / K$	16,2
Maximum recommended load	MPa	115
Maximum recommended speed	m/s	0,7

4. Lubrication

Requires efficient lubrication system.