CL31AL Aluminium Alloy

Similar Properties to 6082
Light, Functional, Heat Resistant

Applications

Material is used for manufacturing

- lightweight prototypes
- Unique or series production parts
- Automotive parts
- Aerospace parts

Physical Properties

Colour	Grey
Type	Aluminium

Mechanical Properties

	Heat Treatment
Yield Strength R_e [1]	170 – 220 N/mm²
Tensile Strength R_m [1]	310 – 325 N/mm²
Elongation A [1]	2 – 3 %
Young's modulus [2]	Approx. 75 · 10^3 N/mm²
Thermal Connectivity λ [2]	120 – 180 W/mK
Coefficient of thermal expansion (at rt) [2]	20 · 10^{-6} K^{-1}

[1] Tensile test according to DIN EN 50125 at 20°C
[2] Specification according to the material manufacturer's data sheet

Material Composition

Component	CL 30AL Indicative Value (%)	CL 31AL Indicative Value (%)
Al	Balance	Balance
Si	10,5 – 13,5	9,0 – 11,0
Mg	0 – 0,05	0,20 – 0,45
Fe	0 – 0,55	0 – 0,55
Mn	0 – 0,35	0 – 0,45
Ti	0 – 0,15	0 – 0,15
Cu	0 – 0,05	0 – 0,10
Zn	0 – 0,10	0 – 0,10
C	0 – 0,05	0 – 0,05
Ni	0 – 0,05	0 – 0,05
Pb	0 – 0,05	0 – 0,05
Sn	0 – 0,05	0 – 0,05

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