

Technical Data Sheet

CL 31AL Material

For the Metal Additive Manufacturing process



Features, benefits and applications

- Manageable post processing with superior malleability and machining properties
- Excellent corrosion resistance
- Good thermal conductivity

Machines

- Available on Concept Laser M2 machine

Physical and Chemical Properties ·	
Material Density	2.61 g/cm ³
Chemical Composition (indicative value %)	
Element	
Al	Bal.
Si	9.00 -11.00
Fe	0 – 0.55
Cu	0 – 0.10
Mn	0 – 0.45
Mg	0.20 – 0.45
Zn	0 – 0.10
Ti	0 – 0.15
Ni	0 – 0.05
Pb	0 – 0.05
Sn	0 – 0.05
C	0 – 0.05

Technical Data After Recommended Heat Treatment ·	
Yield Point R _e 1*	170-220 N/mm ²
Tensile Strength R _m 1*	310-325 N/mm ²
Elongation A 1*	2-3%
Young's Modulus 2*	Approx. 75 · 10 ³ N/mm ²
Thermal Conductivity λ ² 2*	120-180 W/mK
Coefficient of Thermal Expansion (at rt) 2*	20 · 10 ⁻⁶ K ⁻¹

* According to DIN EN 1706 AlSi10Mg(b).

1* Tensile test according to DIN 50125 at 20°C.

2* Specification according to the material manufacturer's data sheet.



Got a question? Need more technical data?

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