

## AlSi10Mg Aluminium

DMLS MATERIAL

Material Properties	Value as built	Value heat treated	Unit
Max. tensile strength	357±27	325±20	MPa
Modulus of elasticity	73±8	65±5	GPa
Yield strength (R <sub>p</sub> 0,2)	227±11	220±20	MPa
Elongation at break	4,1±1	9±2	%
Reduction of area	8±1	-	%
Hardness by Vickers	117±1	-	HV10

Process related properties	Value as built	Unit
Roughness (R <sub>a</sub> / R <sub>z</sub> )	4-6 / 25-35	µm
Achievable part accuracy	± 100 <sup>2)</sup> / ± 0.2% of nom. <sup>3)</sup>	µm

Mentioned mechanical properties are optimum values according to manufacturer.

1) As a result of the part's geometry, strong tensions may cause distortion in the part which may lead to greater deviation.

2) For surfaces which are to be finished mechanically, an allowance of at least 1mm is recommended.

Advice:

Any part density of more than 99.5 % needs to be HIP processed.

We are able to perform additionally customized aftertreatment method.

**Prosilas**

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