

## Ti6Al4V Titanium

DMLS MATERIAL

Material Properties	Value	Unit
Max. tensile strength	<b>1020</b>	MPa
Modulus of elasticity	<b>120</b>	GPa
Yield strength ( $R_p 0,2$ )	<b>950</b>	MPa
Elongation at break	<b>14</b>	%
Reduction of area	<b>40</b>	%
Hardness by Rockwell	<b>33</b>	HRC
Fatigue strength (@ 600 MPa)	<b>&gt; 10 000 000</b>	Cycles

Process related properties	Value	Unit
Roughness ( $R_a / R_z$ )	<b>15-25/80-100</b>	$\mu\text{m}$
Achievable part accuracy	<b><math>\pm 200</math><sup>1)</sup> / <math>\pm 0.4\%</math> of nom.<sup>2)</sup></b>	$\mu\text{m}$

Mentioned mechanical properties are optimum values according to manufacturer.

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

<sup>2)</sup> 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.

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