

Stainless Steel

DMLS MATERIAL

Material properties ^{1) 2) 3)}	Value as built	Unit
Max. tensile strength	Horizontal: 650 Vertical: 590	MPa
Yield strength ($R_p 0.2$)	Horizontal: 550 Vertical: 490	MPa
Elongation at break	Horizontal: 40 Vertical: 45	%
Hardness by Rockwell	90	HRB

Process related properties	Value	Unit
Roughness (after micro shot blasting) (R_a / R_z)	R_a 3-8 / R_z 20-45	μm

Mentioned mechanical properties are optimum values according to manufacturer.

¹⁾ Due to anisotropic effects, some geometries will only allow for lesser values of max. 15 % below manufacturer's information. Please consider this in the design of the part.

²⁾ As a result of the part's geometry, strong tensions may cause distortion in the part which may lead to greater deviation.

³⁾ For surfaces which are to be finished mechanically, an allowance of at least 0.5 mm is recommended for part sizes up to 200 mm and 1.0 mm for bigger parts.

Please note:

Component densities over 99,5% require additional HIP treatment.

Mentioned post-processing options are provided optionally.