

## OCEANZ FLEXIBLE TPU

### Datasheet for flexible TPU parts produced by Selective Laser Sintering



Oceanz Flexible TPU is a rubber-like, natural coloured powder of a thermoplastic polyurethane, which is developed and optimized for the application in a laser sintering system. Laser sintered parts made with Oceanz Flexible TPU possess excellent material properties:

- High elasticity, rebound and resistance to fatigue
- Excellent surface quality and level of detail
- Biocompatible according to ISO 10993-5 and ISO 10993-10

Typical applications of the material are fully functional, flexible plastic parts of highest quality, such as hand braces, insoles, grippers, handles and seals. The rubber-like fatigue behaviour qualifies Oceanz Flexible TPU as an excellent prototyping and series material. Additionally, the material can be used to print very fine, flexible structures with a high level of detail.

Oceanz Flexible TPU is available for retail and industrial applications (ISO 9001) as well as medical grade (ISO 13485) for external applications (e.g. orthotic and prosthetic devices). Oceanz Flexible TPU cannot be coloured, polished or coated.

Part properties	Value	Unit
Part colour	Natural / Whitish	-
Part density	0.97	g/cm <sup>3</sup>
Minimum wall thickness	1.0	mm
Layer thickness	0.10	mm
Max. product size	192 x 240 x 315	mm
Tensile modulus XY	75	MPa
Tensile modulus Z	75	MPa
Tensile strength XY	8	MPa
Tensile strength Z	6	MPa
Strain at break XY	250	%
Strain at break Z	75	%
Hardness	88	Shore A
Melting temperature	120-150	°C

Please note that all mentioned mechanical properties are optimum values according to manufacturer. Due to the layer by layer production process and the specific design of each individual product values may differ. *If specific properties and/or dimensions are critical, always contact us so we can inform you how to obtain required specifications!*

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#### Visit Oceanz

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