advanced manufacturing

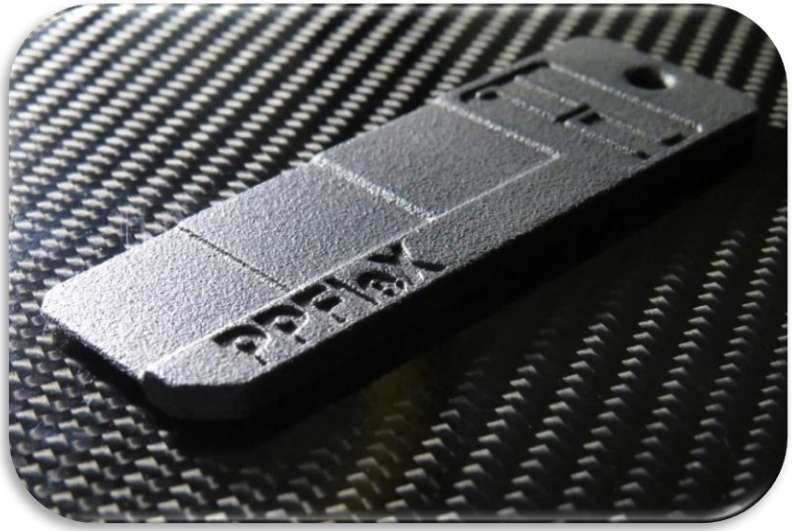
PROTODYNAMIX

Material datasheet

PPFleX
(PA12 black)

Material properties PPFlex

- PA12 based material with PP-like properties
- High elongation at break
- Very good impact strength
- Very good long-term stability
- Low moisture absorption



Materialdatenblatt **PPFleX**

	Norm	**Unit**	**PPFleX**
Density (sintered)	DIN EN ISO 1183-1	g/cm3	**1,00 ± 0.1**
Young`s modulus (bending)	DIN EN ISO 178	MPa	**2100 ± 100**
Young`s modulus (tensile)	DIN EN ISO 527	MPa	**1950 ± 100**
Tensile strength	DIN EN ISO 527	MPa	**50 ± 2**
Ultimate elongation	DIN EN ISO 527	%	**26 ± 5**
Melting point	DSC	°C	**185°C**
Thermostability	DIN EN ISO 75 Method A – 1.82 MPa	°C	**85 ± 5**
Thermostability	DIN EN ISO 75 Method B – 0.45 MPa	°C	**175 ± 5**
Charpy- Impact strength	ISO 179/1eU	kJ/m²	**55 ± 5**

PPFlex is a material on polyamide-12 basis, this material offers mechanical properties similar to PP.

PPFlex is processed on highly advanced laser-sintering systems from 3D Systems.

The typical application for PPFlex is the production of components where a high impact strength and a bit of flexibility is needed

The Laser Sinter Material PPFlex is developed by Protodynamix

– please note that values can vary due to build orientation, build values and powder cycle age

Production technology

	PPFIeX
Production technology	SLS / 3DSystems sPro230
Build envelope	490 x 490 x 740 X/Y/Z (Spro 230 – 2 pcs)
Layer thickness	0.1mm
Min. wall thickness	0.8mm
Tolerances	+/- 0.2mm or above 100 mm: +/- 0,3 % of the nominal dimensions
Surfaces	Bead blasted Filled and polished (to Grain 600)
Powder removal	In cavities 2 holes to access the excess powder