Technical datasheet

nGen_FLEX

Date of issue: April 6, 2020 Version: v1.0



nGen_FLEX is made with Amphora FL6000, a flexible material uniquely engineered for extrusion-based additive manufacturing processes. Thanks to exceptional layer-to-layer adhesion and melt strength, it prints at a faster speed than other elastomeric materials, saving you time. The nGen_FLEX is an engineering-grade material that demonstrates superior durability and toughness, enabling designers to quickly create truly functional parts that can withstand the rigors of everyday use. With a Shore A hardness level of 95, outstanding chemical resistance, and a temperature resistance that allows steam sterilization, users may find it to be the ideal polymer for additive manufacturing of prosthetics, orthotics, automotive parts, apparel, tooling, or a variety of consumer products.

TYPICAL MATERIAL PROPERTIES			
Physical properties	Unit	Value	Method
Density	g/cm3	1,13	D 792
Tensile Stress @ Yield	MPa	14	D 638
Tensile Stress @ Break	MPa	22	D 638
Elongation @ Yield	%	38	D 638
Elongation @ Break	%	400	D 638
Flexural Modulus	MPa	150	D 790
Tear Strength	N	350	D 1004
Durometer Hardness Shore D Scale	-	55	D 2240
Durometer Hardness Shore A Scale	-	95	D 2240
Izod Impact strength, notched @ -40 ºC	J/m	40	D 256
Brittleness Temperature	ōC	< -70	D 746
Vicat Softening Temperature @ 1 kg load	ōC	170	D 1525

FILAMENT SPECIFICATION

Nominal diameter:	Diameter tolerance	Ovality
1,75 mm	± 0,05	≥ 95%
2.85 mm	± 0.05	≥ 95%

Netto filament weight 750 grams / 2200 grams

GUIDELINE FOR PRINT SETTINGS

Advised 3D printing temperature 240 – 260 °C Advised bed temperature 80 °C (+ buildTak)

Bed surface / modification nGen_FLEX gives best results on a buildTak covered buildplate, heated at

around 80C. Make sure the distance between nozzle and buildplate is not

too close, first layer should not be squeezed too much.

Active cooling fan 0-50%Advised 3D printing speed 40-60 mm/sec

Disclaimer

The product- and technical information provided in this datasheet is correct to the best of our knowledge. The information given is provided as a guidance for good use, handling and processing and is not to be considered as a quality specification. The information only relates to the specific product and the material properties.

colorfabb.com

BIC: RABONL2U

KvK nr: 53498607 VAT nr: NL850902770B01 IBAN: NL54RAB00151849188