

RHEON P3D 001

RHEON™ P3D 001 is highly strain-rate sensitive polymer designed for additive manufacture.

It has high energy absorption and a strong strain-rate stiffening behaviour. Available in Pellets and designed for use in FGF 3D printing, the pellets are melted and extruded in layers to produce the desired 3D form.



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DSC Graph



General product data

Property	Value
Colour	Sky Blue ¹
Format	Pellets
Material type	TPE-based

¹ Other colours available on request, minimum order quantities apply

General material properties ²

Property	Test standard	Unit	Value
Hardness	ISO 868:2003 after 15 seconds	Shore A	31.5
MFI	ASTM D1238 (2.16Kg@190°C)	g/10 min	16

² All general material properties were measured on injection moulded slabs.

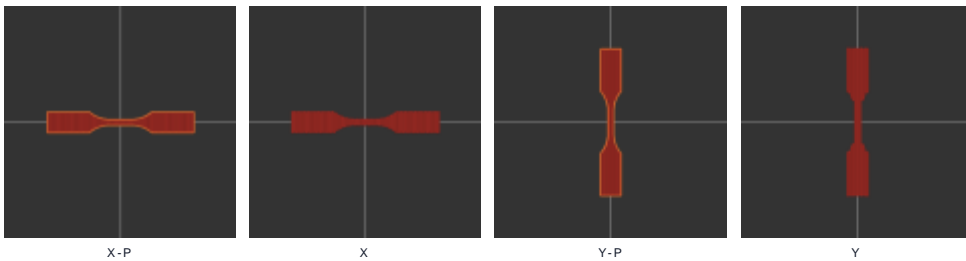


Mechanical properties

Tensile properties ³	Test standard	Geometry ⁴	Unit	Value
Elongation at break	ASTM D638-03	Y-P	%	702
		Y	%	527
		X-P	%	780
		X	%	552
Stress at break	Type 4 specimen	Y-P	MPa	3.94
		Y	MPa	2.67
		X-P	MPa	5.25
		X	MPa	2.31

³ Tensile properties will vary with changing strain-rate

⁴ Direction of 100% infill, -P indicates printing with a perimeter



General printing settings

Suggested printing parameter ⁵	Unit	Value
Nozzle temperature	°C	190
Bed temperature	°C	70-80
Extrusion multiplier		1.6
Print speed	mm/s	0-30
Infill print speed	mm/s	50
Part cooling	%	0 (off)
Infill/perimeters overlap	%	45
Retraction length	mm	10

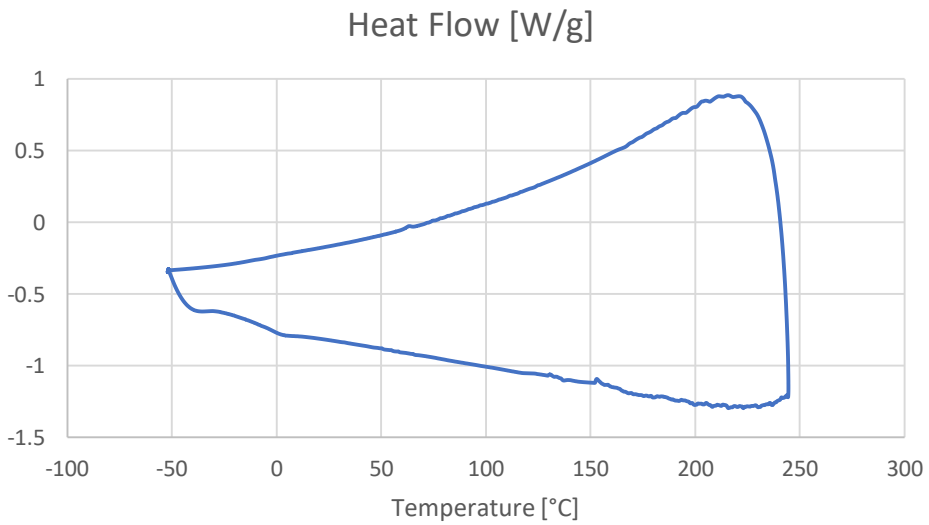
1st layer settings

Property	Unit	Value
Additional extrusion multiplier		1.05
Brim	mm	5
Skirt		5

⁵ Based on best results achieved on a Piocreat G5 Pro Pellet printer with a 0.8mm Nozzle and a Textured PEI plate



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If you have any further questions or are interested in partnering with us, please feel free to contact us.

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