

Caverna™ Microporous Build Material for Additive Manufacturing

Rev 1: 3/3/21

GENERAL INFORMATION								
Resin	Polypropylene Copolymer							
Filler	Carbohydrate							
Fill Level	0 – 100%							
Uses	Extrusion, Injection Molding, 3D Printing							
Form	Pellets or Filament (1.75mm or 2.85mm)							
PHYSICAL PROPERTIES	PRE DISSOLUTION		POST DISSOLUTION		UNITS	METHOD		
Specific Gravity	1.12		0.68			ASTM D792		
Coefficient of Thermal Expansion	5.8 E-05		9.5E-05		in/in°C	ASTM D696		
Durometer	74 D		28 D					
MECHANICAL PROPERTIES							UNITS	METHOD
Melt Flow Index (220 °C; 5kg)	18.5		—		g/10min	ASTM D1238		
	Molded		X-Axis Print		Y-Axis Print	Z-Axis Print		
Tensile	Pre	Post	Pre	Post	Post	Post	ASTM D638	
Modulus	458,800	49,200	373,600	21,900	113,000	12,000	psi	
Strength	4,300	1,500	3,800	1,000	2,000	400	psi	
Elongation @ Break	9.5	19.4	1.6	5.6	2.9	5	%	
Flexural	Pre	Post	Pre	Post	Post	Post	ASTM D790	
Modulus	408,800	54,300	303,900	39,800	75,300	13,900	psi	
Strength	7,700	1,300	6,700	1,200	2,300	400	psi	
Impact (IZOD)								ASTM D256 / D4812
Unnotched	15.8	7.56					ft-lbf/in	
Notched	0.81	2.28					ft-lbf/in	
RECOMMENDED DRYING CONDITIONS								
Oven dry for 4 – 6 hours at 185 °F.								
Barrel Temperatures	380 – 400 °F							
Mold Temperatures	70 – 120 °F							

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