

HiFill® HDPE 2442 3DP BK

Techmer Polymer Modifiers - *High Density Polyethylene*

General Information

Product Description

HiFill® HDPE 2442 3DP BK is a specially formulated, black colored, and compounded thermoplastic material designed for general purpose additive manufacturing applications. This product has been optimized for maximum printability in additive manufacturing.

General

Material Status	• Commercial: Active
Availability	• North America
Filler / Reinforcement	• Glass Fiber
Uses	• Additive Manufacturing (3D Printing)
Appearance	• Black

Properties ¹

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.00		ASTM D792
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	4.0	g/10 min	ASTM D1238
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Yield)	4000	psi	ASTM D638
Tensile Elongation (Break)	1.5	%	ASTM D638
Flexural Modulus	220000	psi	ASTM D790
Flexural Strength	5000	psi	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (0.125 in)	0.50	ft·lb/in	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load (66 psi, Unannealed)	176	°F	ASTM D648
Additional Information	Nominal Value	Unit	Test Method
Recommended Print Bed	HDPE sheet		
Recommended Print Bed Temperature	170 to 180	°F	

Processing Information

Extrusion	Nominal Value	Unit
Drying Temperature	150	°F
Drying Time	1.0 to 2.0	hr
Cylinder Zone 1 Temp.	340 to 370	°F
Cylinder Zone 2 Temp.	350 to 380	°F
Cylinder Zone 3 Temp.	360 to 390	°F
Cylinder Zone 4 Temp.	370 to 400	°F
Melt Temperature	370 to 410	°F
Die Temperature	380 to 410	°F

Extrusion Notes

If drying for longer than 6 hours, recommend reducing the temperature to 100°F in a dessiccant dryer to avoid degradaton of the material. HDPE is not a hygroscopic resin and not expected to pickup significant moisture

Notes

¹ Typical properties: these are not to be construed as specifications.

