

# HiFill® PC 0144 TC-1

Polycarbonate

Techmer Engineered Solutions

## Message:

HiFill® PC 0144 TC-1 is a polycarbonate (PC) product, which contains a 10% glass fiber reinforced material. It can be processed by injection molding and is available in North America. The main characteristics are: flame retardant/rated flame.

General Information			
Filler / Reinforcement	Glass fiber reinforced material, 10% filler by weight		
Appearance	Available colors		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.44	g/cm <sup>3</sup>	ASTM D792
Melt Mass-Flow Rate (MFR) (300°C/1.2 kg)	4.0 - 5.0	g/10 min	ASTM D1238
Molding Shrinkage - Flow (3.18 mm)	0.40	%	ASTM D955
Water Absorption (24 hr)	0.10	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength			ASTM D638
Fracture	42.1	MPa	ASTM D638
--	45.5	MPa	ASTM D638
Tensile Elongation (Break)	1.8	%	ASTM D638
Flexural Modulus	5860	MPa	ASTM D790
Flexural Strength	78.6	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.18 mm)	24	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
CLTE - Flow	5.9E-5	cm/cm/°C	ASTM D696
Specific Heat	1250	J/kg/°C	ASTM C351
Thermal Conductivity	3.0	W/m/K	ASTM C177
Thermal Diffusivity	0.0220		
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity	1.0E+12	ohms · cm	ASTM D257
Dielectric Strength <sup>1</sup>	18	kV/mm	ASTM D149
Flammability	Nominal Value	Unit	Test Method
Flame Rating (2.00 mm)	V-1		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	121	°C	

Drying Time	2.0 - 4.0	hr
Suggested Max Moisture	0.10	%
Rear Temperature	302 - 316	°C
Middle Temperature	316 - 332	°C
Front Temperature	310 - 327	°C
Nozzle Temperature	310 - 327	°C
Processing (Melt) Temp	304 - 327	°C
Mold Temperature	71.1 - 87.8	°C
Injection Rate	Moderate	
Back Pressure	0.00 - 0.689	MPa

#### Injection instructions

Screw Speed: Medium Recommendations for Molding and Tool Conditions: Well vented mold Moisture Content, as received: Product is packaged at 0.2% or less.

#### NOTE

1. Method A (short time)

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#### Recommended distributors for this material

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