

# Electrafil® PA6 CF20 BK

Polyamide 6

Techmer Engineered Solutions

## Message:

Electrafil® PA6 CF20 BK is a polyamide 6 (nylon 6) product, which contains a 20% carbon fiber reinforced material. It can be processed by injection molding and is available in North America.

Features include:

Conductivity

heat stabilizer

Lubrication

General Information			
Filler / Reinforcement	Carbon fiber reinforced material, 20% filler by weight		
Additive	heat stabilizer Lubricant		
Features	Conductivity Thermal Stability Lubrication		
Appearance	Black		
Forms	Particle		
Processing Method	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.22	g/cm <sup>3</sup>	ASTM D792
Molding Shrinkage - Flow (3.18 mm)	0.30	%	ASTM D955
Water Absorption (24 hr)	0.90	%	ASTM D570
Hardness	Nominal Value	Unit	Test Method
Rockwell Hardness (R-Scale)	115		ASTM D785
Mechanical	Nominal Value	Unit	Test Method
Tensile Strength (Break)	186	MPa	ASTM D638
Tensile Elongation (Break)	1.5	%	ASTM D638
Flexural Modulus	13800	MPa	ASTM D790
Flexural Strength	276	MPa	ASTM D790
Impact	Nominal Value	Unit	Test Method
Notched Izod Impact (23°C, 3.18 mm)	110	J/m	ASTM D256
Thermal	Nominal Value	Unit	Test Method
Deflection Temperature Under Load			ASTM D648
0.45 MPa, not annealed	216	°C	ASTM D648
1.8 MPa, not annealed	204	°C	ASTM D648
CLTE - Flow	2.0E-5	cm/cm/°C	ASTM D696
Electrical	Nominal Value	Unit	Test Method

Surface Resistivity	1.0 - 1.0E+3	ohms	ASTM D257
Volume Resistivity	1.0 - 1.0E+3	ohms·cm	ASTM D257
<b>Additional Information</b>	<b>Nominal Value</b>		
TPCI #	9738102		
<b>Injection</b>	<b>Nominal Value</b>	<b>Unit</b>	
Drying Temperature	82.2	°C	
Drying Time	2.0 - 4.0	hr	
Suggested Max Moisture	0.10	%	
Rear Temperature	266 - 277	°C	
Middle Temperature	277 - 288	°C	
Front Temperature	271 - 282	°C	
Nozzle Temperature	271 - 282	°C	
Processing (Melt) Temp	277 - 288	°C	
Mold Temperature	79.4 - 104	°C	
Injection Rate	Slow-Moderate		
Back Pressure	0.00 - 0.345	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.

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#### Recommended distributors for this material

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