Petra® 130 FR

BASF Corporation - Polyethylene Terephthalate

Tuesday, November 5, 2019

General Information

Product Description

Petra 130 FR is a 30% glass fiber reinforced, flame retardant injection molding compound based on post-consumer and post-industrial recycle polyethylene terephthalate feedstocks. It is recognized as UL 94V-0/5VA by Underwriters Laboratories. It is also available in pigmented versions.

Applications
Petra 130 FR is generally recommended for applications such as electrical housing and bobbins.

General		
Material Status	• Commercial: Active	
Availability	• Asia Pacific	• North America
Filler / Reinforcement	• Glass Fiber, 30% Filler by Weight	
Recycled Content	• Yes	
Features	• Flame Retardant	
Uses	• Bobbins	• Electrical Housing
Appearance	• Colors Available	
Forms	• Pellets	
Processing Method	• Injection Molding	

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density / Specific Gravity	1.68		ASTM D792
Density	1.68	g/cm³	ISO 1183
Molding Shrinkage - Flow (0.125 in)	3.0E-3	in/in	
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus (73°F)	1.61E+6	psi	ISO 527-2
Tensile Strength (Break, 73°F)	18900	psi	ASTM D638
Tensile Stress (Break, 73°F)	18900	psi	ISO 527-2
Tensile Elongation (Break, 73°F)	2.0	%	ASTM D638
Tensile Strain (Break, 73°F)	2.0	%	ISO 527-2
Flexural Modulus			ASTM D790
-40°F	1.80E+6	psi	
73°F	1.41E+6	psi	
250°F	431000	psi	
Flexural Strength			ASTM D790
-40°F	39900	psi	
73°F	30500	psi	
250°F	12300	psi	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179
-22°F	3.6	ft·lb/in²	
73°F	3.8	ft·lb/in²	
Notched Izod Impact (73°F)	1.7	ft·lb/in	ASTM D256

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Impact	Nominal Value	Unit	Test Method
Notched Izod Impact Strength			ISO 180
-40°F	3.1	ft·lb/in²	
73°F	3.3	ft·lb/in²	
Hardness	**Nominal Value**	**Unit**	**Test Method**
Rockwell Hardness (R-Scale)	118		ASTM D785
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	464	°F	ISO 75-2/B
Deflection Temperature Under Load			ASTM D648
264 psi, Unannealed	428	°F	
Heat Deflection Temperature (264 psi, Unannealed)	410	°F	ISO 75-2/A
Peak Melting Temperature	473	°F	ASTM D3418
Melting Temperature (DSC)	473	°F	ISO 3146
CLTE - Flow	1.3E-5	in/in/°F	ASTM E831
RTI Elec			UL 746
0.012 in	167	°F	
0.030 in	311	°F	
0.06 in	311	°F	
0.12 in	311	°F	
RTI Imp			UL 746
0.012 in	167	°F	
0.030 in	311	°F	
0.06 in	311	°F	
0.12 in	311	°F	
RTI Str			UL 746
0.012 in	167	°F	
0.030 in	311	°F	
0.06 in	311	°F	
0.12 in	311	°F	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Volume Resistivity (0.0591 in)	> 1.0E+13	ohms·cm	ASTM D257
Volume Resistivity	> 1.0E+13	ohms·cm	IEC 60093
Dielectric Strength (0.0591 in, Method A (Short-Time))	560	V/mil	ASTM D149
Electric Strength	1000	V/mil	IEC 60243-1
Dielectric Constant			IEC 60250
100 Hz	3.80		
1 MHz	3.60		
Dissipation Factor			IEC 60250
100 Hz	0.020		
1 MHz	0.020		
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating			UL 94
0.012 in	V-0		
0.030 in	• V-0 • 5VA		
0.06 in	• V-0 • 5VA		
0.12 in	• V-0 • 5VA		

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Processing Information

Injection	Nominal Value	Unit
Drying Temperature	248	°F
Drying Time	2.0 to 4.0	hr
Suggested Max Moisture	0.020	%
Processing (Melt) Temp	536 to 572	°F
Mold Temperature	212 to 230	°F
Injection Pressure	508 to 1810	psi
Injection Rate	Fast	

Notes

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