Riteflex® 440F

Celanese Corporation - Thermoplastic Polyester Elastomer

Tuesday, November 5, 2019

General Information

Product Description

Riteflex 440F is a nominal 38 Shore D thermoplastic polyester elastomer with medium modulus and improved flow for injection molding applications and use as a performance modifier for TPE compounding.

General			
Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Flow	• Medium Stiffness	
Uses	• Compounding		
Processing Method	• Injection Molding		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.11	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/2.16 kg)	25	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.2 to 1.4	%	ISO 294-4
Water Absorption (Saturation, 73°F)	0.60	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	7250	psi	ISO 527-2/1A
Tensile Stress (Break)	2610	psi	ISO 527-2/1A/50
Tensile Stress (50% Strain)	1020	psi	ISO 527-2/1A/50
Tensile Strain (Break)	> 300	%	ISO 527-2/1A/50
Flexural Modulus (73°F)	6530	psi	ISO 178
Flexural Stress			ISO 178
3.5% Strain	290	psi	
73°F	580	psi	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-22°F	No Break		
73°F	No Break		
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F	No Break		
73°F	No Break		
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness			ISO 868
Shore A, 15 sec	88		
Shore D, 15 sec	36		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	117	°F	ISO 75-2/B
Vicat Softening Temperature	261	°F	ISO 306/A50
Melting Temperature [2]	383	°F	ISO 11357-3
CLTE - Flow	1.3E-4	in/in/°F	ISO 11359-2

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Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+15	ohms	IEC 60093
Volume Resistivity	2.0E+14	ohms·cm	IEC 60093
Relative Permittivity (1 MHz)	5.00		IEC 60250
Dissipation Factor (1 MHz)	0.020		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 248	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.050	%
Hopper Temperature	68 to 122	°F
Rear Temperature	365 to 392	°F
Middle Temperature	365 to 410	°F
Front Temperature	365 to 410	°F
Nozzle Temperature	374 to 419	°F
Processing (Melt) Temp	374 to 419	°F
Mold Temperature	68 to 131	°F
Injection Rate	Moderate-Fast	

Injection Notes

Feeding zone temperature: 185 to 200°C
Zone4 temperature: 185 to 215°C
Hot runner temperature: 190 to 215°C

Notes

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

[2] 10°C/min