Riteflex® 677

Thermoplastic Copolyester Elastomer

Celanese Corporation

Message:

Riteflex 677 is a thermoplastic polyester elastomer with nominal hardness of 77 shore D and high modulus.

General Information			
UL YellowCard	E45575-239423		
Features	Rigidity, high		
RoHS Compliance	Contact manufacturer		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity			
--	1.29	g/cm³	ASTM D792
--	1.27	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR)			
--	12 - 16	g/10 min	ASTM D1238
250°C/2.16 kg	15	g/10 min	ISO 1133
Molding Shrinkage			
Flow	2.0	%	ASTM D955
Vertical flow direction	1.7 - 2.2	%	ISO 294-4
Flow direction	1.8 - 2.2	%	ISO 294-4
Shear	1000	1/°C	Internal method
Viscosity	461	Pa·s	Internal method
Tear Strength	360.8	kN/m	ASTM D1004
Temperature	250	°C	Internal method
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness			
Shaw D	77		ASTM D2240
Shaw D, 15 seconds	75		ISO 868
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus			
23°C	689	MPa	ASTM D638
--	750	MPa	ISO 527-2/1A/1
Tensile Strength			
Yield, 23°C	34.5	MPa	ASTM D638
Yield	33.0	MPa	ISO 527-2/1A/50
Fracture	42.0	MPa	ISO 527-2/1A/50
5.0% strain	32.0	MPa	ISO 527-2
10% strain	36.0	MPa	ISO 527-2
50% strain	26.0	MPa	ISO 527-2/1A/50

Tensile Strain			
Yield	15	%	ISO 527-2/1A/50
Fracture, 23°C	310	%	ASTM D638
Fracture	350	%	ISO 527-2/1A/50
Nominal Tensile Strain at Break	> 50	%	ISO 527-2/1A/50
Flexural Modulus			ISO 178
-40°C	2500	MPa	ISO 178
23°C	650	MPa	ISO 178
Flexural Stress			ISO 178
3.5% strain	23.0	MPa	ISO 178
23°C	30.0	MPa	ISO 178
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength	357	kN/m	ASTM D624
Bayshore Resilience			
--	40	%	Internal method
--	40	%	ASTM D2632
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength (23°C)	9.4	kJ/m²	ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	4.5	kJ/m²	ISO 179/1eU
23°C	71	kJ/m²	ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-30°C	4.7	kJ/m²	ISO 180/1A
23°C	8.5	kJ/m²	ISO 180/1A
Unnotched Izod Impact Strength (23°C)	No Break		ISO 180/1U
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature			
0.45 MPa, not annealed	109	°C	ISO 75-2/B
1.8 MPa, not annealed	51.0	°C	ISO 75-2/A
Melting Temperature			
-- [1]	218	°C	ISO 11357-3
--	217	°C	ASTM D3418
CLTE - Flow	1.4E-4	cm/cm/°C	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	2.0E+17	ohms	IEC 60093
Volume Resistivity			
--	5.0E+14	ohms·cm	ASTM D257
--	4.0E+16	ohms·cm	IEC 60093
Dielectric Strength			
-- [2]	15	kV/mm	ASTM D149
--	16	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	3.30		IEC 60250

Dissipation Factor (1 MHz)	0.040		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112, ASTM D3638
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (1.50 mm)	HB		UL 94
Injection	**Nominal Value**	**Unit**	
Drying Temperature	100 - 110	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.050	%	
Suggested Max Regrind	25	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	230 - 240	°C	
Middle Temperature	235 - 250	°C	
Front Temperature	235 - 250	°C	
Nozzle Temperature	240 - 260	°C	
Processing (Melt) Temp	235 - 260	°C	
Mold Temperature	20.0 - 55.0	°C	
Injection Rate	Moderate-Fast		
Back Pressure	0.00 - 0.345	MPa	
Injection instructions			
Manifold Temperature: 235 to 260°CZone 4 Temperature: 240 to 260°CFeed Temperature: 230 to 240°C			
NOTE			
1.	10°C/min		
2.	Method A (short time)		

Recommended distributors for this material

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