

Riteflex® 440

Thermoplastic Copolyester Elastomer

Celanese Corporation

Message:

Riteflex 440 is a nominal 40 Shore D thermoplastic polyester elastomer with medium modulus.

General Information			
Features	Rigid, good		
RoHS Compliance	Contact manufacturer		
Processing Method	Blow molding		
	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Density	1.11	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/2.16 kg)	13	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.2 - 1.4	%	ISO 294-4

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shaw A, 15 seconds	92		ISO 868
Shaw D, 15 seconds	38		ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	55.0	MPa	ISO 527-2/1A/1
Tensile Stress			
Fracture	21.0	MPa	ISO 527-2
Fracture	18.0	MPa	ISO 527-2/1A/50
5.0% strain	2.00	MPa	ISO 527-2
10% strain	4.00	MPa	ISO 527-2
50% strain	7.00	MPa	ISO 527-2/1A/50
100% strain	8.00	MPa	ISO 527-2
300% strain	12.7	MPa	ISO 527-2
Tensile Strain (Break)	650	%	ISO 527-2/1A/50
Flexural Modulus			ISO 178
-40°C	270	MPa	ISO 178
23°C	45.0	MPa	ISO 178
100°C	26.0	MPa	ISO 178
Flexural Stress			ISO 178
3.5% strain	2.00	MPa	ISO 178
23°C	4.00	MPa	ISO 178

Ross Flex	> 1.0E+6	Cycles	Internal method
Elastomers	Nominal Value	Unit	Test Method
Tear Strength - Flow ¹	96	kN/m	ISO 34-1
Bayshore Resilience	58	%	Internal method
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	No Break		ISO 179/1eA
23°C	No Break		ISO 179/1eA
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		ISO 179/1eU
23°C	No Break		ISO 179/1eU
Notched Izod Impact			ISO 180/1A
-40°C	No Break		ISO 180/1A
-30°C	No Break		ISO 180/1A
23°C	No Break		ISO 180/1A
Unnotched Izod Impact Strength			ISO 180/1U
-30°C	No Break		ISO 180/1U
23°C	No Break		ISO 180/1U
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature (0.45 MPa, Unannealed)	47.0	°C	ISO 75-2/B
Melting Temperature ²	195	°C	ISO 11357-3
CLTE - Flow	2.4E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+15	ohms	IEC 60093
Volume Resistivity	2.0E+12	ohms · cm	IEC 60093
Dielectric Strength	26	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	4.90		IEC 60250
Dissipation Factor (1 MHz)	0.020		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112
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	185 - 200	°C	
Middle Temperature	185 - 210	°C	
Front Temperature	185 - 210	°C	
Nozzle Temperature	190 - 215	°C	

Processing (Melt) Temp	190 - 215	°C
Mold Temperature	20.0 - 55.0	°C
Injection Rate	Moderate-Fast	
Back Pressure	0.00 - 0.345	MPa

Injection instructions

Manifold Temperature: 190 to 215°CZone 4 Temperature: 185 to 215°CFeed Temperature: 185 to 200°C

NOTE

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| 1. | Die C |
| 2. | 10°C/min |

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Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China



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