Riteflex® 640A

Celanese Corporation - Thermoplastic Polyester Elastomer

Tuesday, November 5, 2019

General Information

Product Description

Riteflex 640A is a thermoplastic polyester elastomer with nominal shore D hardness of 40 and medium-low modulus.

General

Material Status	• Commercial: Active		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
RoHS Compliance	• Contact Manufacturer		

ASTM & ISO Properties [1]

Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/2.16 kg)	10	g/10 min	ISO 1133
Molding Shrinkage - Flow	1.2 to 1.4	%	ISO 294-4
Water Absorption (Saturation, 73°F)	0.70	%	ISO 62
Water Absorption (Equilibrium, 73°F, 50% RH)	0.20	%	ISO 62
Mechanical	**Nominal Value**	**Unit**	**Test Method**
Tensile Modulus	10900	psi	ISO 527-2/1A
Tensile Stress (Break)	2470	psi	ISO 527-2/1A/50
Tensile Stress			
5.0% Strain	435	psi	ISO 527-2/1BA
10% Strain	725	psi	ISO 527-2/1BA
50% Strain	1160	psi	ISO 527-2/1A/50
50% Strain	1160	psi	ISO 527-2/1BA
Tensile Strain (Break)	> 300	%	ISO 527-2/1A/50
Flexural Modulus			ISO 178
-40°F	16700	psi	
73°F	10200	psi	
Flexural Stress			ISO 178
3.5% Strain	435	psi	
73°F	725	psi	
Ross Flex	> 1.0E+6	Cycles	ASTM D1052
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength - Flow [2]	480	lbf/in	ISO 34-1
Bayshore Resilience	59	%	ASTM D2632
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		

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Impact	Nominal Value	Unit	Test Method
Unnotched Izod Impact Strength			ISO 180/1U
-22°F	No Break		
73°F	No Break		
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness (Shore D, 15 sec)	40		ISO 868
Thermal	**Nominal Value**	**Unit**	**Test Method**
Heat Deflection Temperature (66 psi, Unannealed)	133	°F	ISO 75-2/B
Brittleness Temperature	-108	°F	ISO 974
Vicat Softening Temperature	246	°F	ISO 306/A50
Melting Temperature [3]	338	°F	ISO 11357-3
CLTE - Flow	1.2E-4	in/in/°F	ISO 11359-2
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	3.0E+15	ohms	IEC 60093
Volume Resistivity	5.0E+12	ohms·cm	IEC 60093
Electric Strength	330	V/mil	IEC 60243-1
Relative Permittivity (1 MHz)	4.70		IEC 60250
Dissipation Factor (1 MHz)	0.030		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Flame Rating (0.06 in)	HB		UL 94

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	212 to 230	°F
Drying Time	4.0	hr
Suggested Max Moisture	0.050	%
Hopper Temperature	68 to 122	°F
Rear Temperature	320 to 356	°F
Middle Temperature	338 to 392	°F
Front Temperature	338 to 392	°F
Nozzle Temperature	338 to 401	°F
Processing (Melt) Temp	338 to 401	°F
Mold Temperature	68 to 131	°F
Injection Rate	Moderate-Fast	

Injection Notes

Feeding zone temperature: 160 to 180°C
Zone4 temperature: 170 to 205°C
Hot runner temperature: 170 to 205°C

Notes

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

[2] Die C

[3] 10°C/min