

Riteflex® MT9655

Thermoplastic Copolyester Elastomer

Ticona

Product Description

Riteflex MT9655 is an unfilled Thermoplastic Polyester Elastomer with a nominal Shore D hardness of 55 that complies with the requirements of CFR 21 177.1590 and 177.2600 of the Food and Drug Administration (FDA) and is listed in the Drug Master File (DMF) 10047 (US) / 10033 (EU) and the Device Master File (MAF) 443 and 316 (US). Riteflex MT9655 also complies with the corresponding EU 2002/72/EG and national registry regulatory requirements. Riteflex MT9655 has displayed excellent biocompatibility in tests corresponding to USP 25 class VI, ISO 10993 and contains no animal derived materials.

General

Features	• No Animal Derived Components		
Uses	• Medical/Healthcare Applications		
Agency Ratings	• DMF 10033 • DMF 10047 • EU 2002/72/EG	• FDA 21 CFR 177.1590 • FDA 21 CFR 177.2600 • MAF 316	• MAF 443 • UL MWHT2
RoHS Compliance	• Contact Manufacturer		
Processing Method	• Blow Molding	• Extrusion	• Injection Molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	1.19	g/cm ³	ASTM D792 ISO 1183
Melt Mass-Flow Rate (MFR)			
--	7.0 to 11	g/10 min	ASTM D1238
220°C/2.16 kg	9.0	g/10 min	ISO 1133
Molding Shrinkage			
Flow	1.5	%	ASTM D955
Across Flow	1.7 to 2.1	%	ISO 294-4
Flow	1.6 to 1.9	%	ISO 294-4
Water Absorption (Saturation, 23°C)	0.40	%	ISO 62
Specific Volume	0.842	cm ³ /g	ASTM D792

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus			
23°C	241	MPa	ASTM D638
--	190	MPa	ISO 527-2/1A/1
Tensile Strength			
Break, 23°C	25.2	MPa	ASTM D638
Break	34.0	MPa	ISO 527-2/1A/50
50% Strain	15.0	MPa	ISO 527-2/1A/50
Tensile Elongation			
Break, 23°C	430	%	ASTM D638
Break	> 300	%	ISO 527-2/1A/50
Flexural Modulus			ISO 178
-40°C	709	MPa	
23°C	205	MPa	
100°C	86.0	MPa	
Flexural Strength (3.5% Strain)	7.00	MPa	ISO 178

Elastomers	Nominal Value	Unit	Test Method
Tear Strength	212	kN/m	ASTM D624
Compression Set (23°C)	1.0	%	ASTM D395
Bashore Resilience			
--	48	%	Internal Method
--	48	%	ASTM D2632

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Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C, Partial Break	65	kJ/m ²	
23°C, Partial Break	150	kJ/m ²	
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			
Shore D	55		ASTM D2240
Shore D, 15 sec	55		ISO 868
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	75.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	45.0	°C	ISO 75-2/A
Glass Transition Temperature	-56.7	°C	ASTM D3418
Vicat Softening Temperature	181	°C	ASTM D1525
Melting Temperature	200	°C	ASTM D3418 ISO 11357
CLTE			ISO 11359-2
Flow	0.00020	cm/cm/°C	
Transverse	0.00017	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Volume Resistivity			
--	5.0E+12	ohm·cm	ASTM D257
--	4.0E+12	ohm·cm	IEC 60093
Dielectric Strength			
-- ²	14	kV/mm	ASTM D149
--	14	kV/mm	IEC 60243-1
Relative Permittivity (1E+6 Hz)	4.00		IEC 60250
Dissipation Factor (1E+6 Hz)	0.040		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112
Comparative Tracking Index	> 600	V	ASTM D3638
Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL (1.50 mm)	HB		UL 94
Additional Information	Nominal Value	Unit	Test Method
Ross Flex	> 1.0E+6	Cycles	Internal Method
Tear Strength	217.2	kN/m	ASTM D1004

Notes

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

² Method A (Short-Time)