

Riteflex® 425

Thermoplastic Copolyester Elastomer

Celanese Corporation

Message:

Riteflex 425 is a nominal 25 Shore D thermoplastic polyester elastomer with low modulus and outstanding low temperature impact, and tear resistance.

General Information			
UL YellowCard	E45575-100732492		
Features	Good tear strength		
	Low temperature impact resistance		
RoHS Compliance	Contact manufacturer		
Processing Method	Blow molding		
	Extrusion		
	Injection molding		

Physical	Nominal Value	Unit	Test Method
Density	1.06	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	13	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Vertical flow direction	1.2	%	ISO 294-4
Flow direction	1.2	%	ISO 294-4

Hardness	Nominal Value	Unit	Test Method
Durometer Hardness			ISO 868
Shaw A, 15 seconds	79		ISO 868
Shaw D, 15 seconds	24		ISO 868

Mechanical	Nominal Value	Unit	Test Method
Tensile Stress			
Fracture	10.0	MPa	ISO 527-2/1A/50
5.0% strain	1.00	MPa	ISO 527-2
10% strain	2.00	MPa	ISO 527-2
50% strain	3.00	MPa	ISO 527-2/1A/50
Tensile Strain (Break)	750	%	ISO 527-2/1A/50
Flexural Modulus			
-40°C	162	MPa	ISO 178
23°C	17.0	MPa	ISO 178
100°C	8.00	MPa	ISO 178
Flexural Stress			
3.5% strain	1.00	MPa	ISO 178

23°C	1.00	MPa	ISO 178
Ross Flex	> 1.0E+6	Cycles	Internal method
Elastomers	Nominal Value	Unit	Test Method
Tear Strength ¹			ISO 34-1
Transverse flow	62	kN/m	ISO 34-1
Flow	61	kN/m	ISO 34-1
Bayshore Resilience	65	%	ASTM D2632
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)	42.0	°C	ISO 75-2/B
Melting Temperature ²	155	°C	ISO 11357-3
CLTE - Flow	2.5E-4	cm/cm/°C	ISO 11359-2
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	2.0E+14	ohms	IEC 60093
Volume Resistivity	2.0E+14	ohms · cm	IEC 60093
Dielectric Strength	24	kV/mm	IEC 60243-1
Relative Permittivity (1 MHz)	5.10		IEC 60250
Comparative Tracking Index	> 600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flame Rating (1.60 mm)	HB		UL 94
Injection	Nominal Value	Unit	
Drying Temperature	100 - 110	°C	
Drying Time	4.0	hr	
Suggested Max Moisture	0.050	%	
Hopper Temperature	20.0 - 50.0	°C	
Rear Temperature	155 - 170	°C	
Middle Temperature	170 - 180	°C	
Front Temperature	170 - 180	°C	

Nozzle Temperature	170 - 190	°C
Processing (Melt) Temp	170 - 190	°C
Mold Temperature	20.0 - 55.0	°C
Injection Rate	Moderate-Fast	

Injection instructions

Manifold Temperature: 170 to 190°CZone 4 Temperature: 170 to 180°CFeed Temperature: 155 to 170°C

NOTE

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| 1. | Die C |
| 2. | 10°C/min |

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