

Hytrel® HTR8139BK

THERMOPLASTIC POLYESTER ELASTOMER

DuPont Performance Polymers

Message:

44 Shore D, Lubricated, High Viscosity Polyester Elastomer Developed for Blow Molding

General Information			
Additive	Heat Stabilizer		
	Lubricant		
	UV Stabilizer		
Features	Heat Stabilized		
	Lubricated		
Uses	Blow Molding Applications		
Forms	Pellets		
Processing Method	Blow Molding		
	Injection Molding		
	Thermoforming		
Multi-Point Data	Isothermal Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (TPE) (ISO 11403-1)		
	Secant Modulus vs. Strain (ISO 11403-1)		
	Tensile Modulus vs. Temperature, Dynamic (ISO 11403-1)		
Part Marking Code (ISO 11469)	>TPC-ET<		
Resin ID (ISO 1043)	TPC-ET		
Physical	Nominal Value	Unit	Test Method
Density	1.15	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/2.16 kg)	2.1	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/2.16 kg)	1.90	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	1.6	%	
Water Absorption			
24 hr	0.70	%	ASTM D570
23°C, 24 hr, 2.00 mm	0.70	%	ISO 62
Equilibrium, 23°C, 2.00 mm, 50% RH	0.20	%	ISO 62
Hardness	Nominal Value	Unit	Test Method

Shore Hardness			ISO 868
Shore D	44		
Shore D, 15 sec	40		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	55.0	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	32.0	MPa	
5.0% Strain	4.50	MPa	
10% Strain	6.70	MPa	
50% Strain	11.8	MPa	
100% Strain	14.0	MPa	
300% Strain	23.0	MPa	
Tensile Strain (Break)	> 300	%	ISO 527-2
Nominal Tensile Strain at Break	510	%	ISO 527-2
Flexural Modulus	87.0	MPa	ISO 178
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°C	No Break		
-30°C	No Break		
23°C	No Break		
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-40°C	No Break		
23°C	No Break		
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	58.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	44.0	°C	ISO 75-2/A
Brittleness Temperature	-100	°C	ISO 974
Glass Transition Temperature ¹	-45.0	°C	ISO 11357-2
Melting Temperature ²	194	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.8E-4	cm/cm/°C	
Transverse	1.9E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	4.0E+13	ohms · cm	IEC 60093
Electric Strength	19	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.90		

1 MHz	4.60		
Dissipation Factor			IEC 60250
100 Hz	5.0E-3		
1 MHz	0.028		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Oxygen Index	21	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	
Melt Density	0.960	g/cm ³	
Additional Information	Nominal Value	Unit	
Effective Thermal Diffusivity	0.0544	cSt	
NOTE			
1.	10°C/min		
2.	10°C/min		

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