

Hytrel® HTR4275 BK316

THERMOPLASTIC POLYESTER ELASTOMER

DuPont Performance Polymers

Message:

55 Shore D High Viscosity Polyester Elastomer with Good Heat Ageing Protection Developed for Blow Molding

General Information			
Additive	Heat Stabilizer		
	UV Stabilizer		
Features	Heat Stabilized		
Uses	Blow Molding Applications		
	Profiles		
Forms	Pellets		
Processing Method	Blow Molding		
	Injection Molding		
	Profile Extrusion		
	Thermoforming		
Multi-Point Data	Creep Modulus vs. Time (ISO 11403-1)		
	Isochronous Stress vs. Strain (ISO 11403-1)		
	Isothermal Stress vs. Strain (TPE) (ISO 11403-1)		
	Shear Stress vs. Shear Rate (ISO 11403-1)		
	Specific Volume vs Temperature (ISO 11403-2)		
	Tensile Modulus vs. Temperature, Dynamic (ISO 11403-1)		
	Viscosity vs. Shear Rate (ISO 11403-2)		
Part Marking Code (ISO 11469)	>TPC-ET<		
Resin ID (ISO 1043)	TPC-ET		
Physical	Nominal Value	Unit	Test Method
Density	1.17	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/10.0 kg)	6.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/10.0 kg)	6.00	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.9	%	
Flow	1.7	%	
Water Absorption			
24 hr	0.50	%	ASTM D570

23°C, 24 hr, 2.00 mm	0.50	%	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	55		
Shore D, 15 sec	52		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	160	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	37.0	MPa	
5.0% Strain	6.70	MPa	
10% Strain	10.4	MPa	
50% Strain	17.0	MPa	
100% Strain	21.0	MPa	
Tensile Strain (Break)	> 300	%	ISO 527-2
Nominal Tensile Strain at Break	450	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	137	MPa	
1000 hr	91.0	MPa	
Flexural Modulus	170	MPa	ISO 178
Elastomers	Nominal Value	Unit	Test Method
Tear Strength			ISO 34-1
Across Flow	100	kN/m	
Flow	140	kN/m	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°C	30	kJ/m ²	
-30°C, Partial Break	160	kJ/m ²	
23°C	No Break		
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179/1eU
Tensile Impact Strength (23°C)	480	kJ/m ²	ISO 8256/1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	57.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	41.0	°C	ISO 75-2/A
Brittleness Temperature	-100	°C	ISO 974
Glass Transition Temperature ¹	-30.0	°C	ISO 11357-2
Melting Temperature ²	192	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.8E-4	cm/cm/°C	
Transverse	1.9E-4	cm/cm/°C	
Flammability	Nominal Value	Unit	Test Method

Burning Rate (1.00 mm)	38	mm/min	ISO 3795
Flammability Classification (1.50 mm)	HB		IEC 60695-11-10, -20
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.00	g/cm ³	
Specific Heat Capacity of Melt	2100	J/kg/°C	
Thermal Conductivity of Melt	0.15	W/m/K	
Effective Thermal Diffusivity	0.0544	cSt	
Odor	3.5		VDA 270
NOTE			
1.	10°C/min		
2.	10°C/min		

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