

Hytrel® RS R4275 BK316

Thermoplastic Copolyester Elastomer

DuPont Performance Polymers

Message:

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

General Information			
Additive	Heat Stabilizer		
Features	Heat Stabilized		
Uses	Blow Molding Applications		
	Film		
	Profiles		
	Sheet		
Forms	Pellets		
Processing Method	Blow Molding		
	Calendering		
	Casting		
	Coating		
	Extrusion		
	Film Extrusion		
	Profile Extrusion		
	Sheet 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)		
Part Marking Code (ISO 11469)	>TPC-ET<		
Resin ID (ISO 1043)	TPC-ET		
Physical	Nominal Value	Unit	Test Method
Density	1.17	g/cm ³	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	cm ³ /10min	ISO 1133
Molding Shrinkage	ISO 294-4		

Across Flow	1.9	%	
Flow	1.4	%	
Water Absorption			ISO 62
23°C, 24 hr, 2.00 mm	0.50	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	0.20	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness (Shore D, 15 sec)	50		ISO 868
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	150	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	35.0	MPa	
5.0% Strain	6.40	MPa	
10% Strain	10.0	MPa	
50% Strain	16.0	MPa	
100% Strain	21.0	MPa	
Tensile Strain (Break)	> 300	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	140	MPa	
1000 hr	90.0	MPa	
Elastomers	Nominal Value	Unit	Test Method
Tear Strength - Flow	140	kN/m	ISO 34-1
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°C	45	kJ/m ²	
-30°C, Partial Break	160	kJ/m ²	
23°C	No Break		
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Tensile Impact Strength (23°C)	500	kJ/m ²	ISO 8256/1
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-70.0	°C	ISO 974
Glass Transition Temperature ¹	-30.0	°C	ISO 11357-2
Melting Temperature ²	190	°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		Test Method
Flammability Classification (1.50 mm)	HB		IEC 60695-11-10, -20
Fill Analysis	Nominal Value	Unit	
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
NOTE		
1.	10°C/min	
2.	10°C/min	

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