

Hytrel® RS 40F5 NC010

Thermoplastic Copolyester Elastomer

DuPont Performance Polymers

Message:

40 Shore D, Renewably Sourced, Medium Viscosity Polyester Elastomer

General Information			
Uses	Film		
	Profiles		
	Sheet		
Forms	Pellets		
Processing Method	Calendering		
	Casting		
	Coating		
	Extrusion		
	Film Extrusion		
	Injection Molding		
	Profile Extrusion		
	Sheet Extrusion		
	Thermoforming		
Multi-Point Data	Shear Stress vs. Shear Rate (ISO 11403-1)		
Part Marking Code (ISO 11469)	>TPC-ET<		
Resin ID (ISO 1043)	TPC-ET		
Physical	Nominal Value	Unit	Test Method
Density	1.11	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (220°C/2.16 kg)	9.0	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (220°C/2.16 kg)	9.00	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.70	%	
Across Flow : 80°C, 48 hr	0.80	%	
Flow	0.90	%	
Flow : 80°C, 48 hr	1.0	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D	37		
Shore D, 15 sec	33		
Mechanical	Nominal Value	Unit	Test Method

Tensile Modulus	45.0	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	25.0	MPa	
5.0% Strain	2.10	MPa	
10% Strain	3.50	MPa	
50% Strain	6.70	MPa	
Tensile Strain (Break)	> 300	%	ISO 527-2
Nominal Tensile Strain at Break	800	%	ISO 527-2
Flexural Modulus	50.0	MPa	ISO 178
Elastomers	Nominal Value	Unit	Test Method
Tear Strength			ISO 34-1
Across Flow	100	kN/m	
Flow	100	kN/m	
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		
Thermal	Nominal Value	Unit	Test Method
Brittleness Temperature	-95.0	°C	ISO 974
Ductile / Brittle Transition Temperature	-95.0	°C	ISO 6603-2
Melting Temperature ¹	190	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	2.1E-4	cm/cm/°C	
Transverse	2.0E-4	cm/cm/°C	
Flammability	Nominal Value	Unit	Test Method
Flammability Classification (1.50 mm)	HB		IEC 60695-11-10, -20
Oxygen Index	20	%	ISO 4589-2
Additional Information	Nominal Value	Unit	
Effective Thermal Diffusivity	0.0544	cSt	
NOTE			
1.	10°C/min		

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