

Hytrel® DYM350BK

THERMOPLASTIC POLYESTER ELASTOMER

DuPont Performance Polymers

Message:

Medium Modulus Polyester Elastomer with Excellent Impact Resistance Developed for Air Bag Door Applications

General Information			
Additive	UV Stabilizer		
Forms	Pellets		
Processing Method	Injection Molding		
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 (ISO 11403-1)		
Part Marking Code (ISO 11469)	>TPC-ET+PBT<		
Resin ID (ISO 1043)	TPC-ET+PBT		
Physical	Nominal Value	Unit	Test Method
Density	1.18	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (240°C/2.16 kg)	15	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (240°C/2.16 kg)	14.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	1.3	%	
Water Absorption			
24 hr	0.60	%	ASTM D570
23°C, 24 hr, 2.00 mm	0.60	%	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	50		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	370	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield	15.0	MPa	
Break	35.0	MPa	
5.0% Strain	10.5	MPa	
10% Strain	13.0	MPa	

50% Strain	16.0	MPa	
Tensile Strain			ISO 527-2
Yield	43	%	
Break	> 300	%	
Nominal Tensile Strain at Break	600	%	ISO 527-2
Flexural Modulus	430	MPa	ISO 178
Elastomers	Nominal Value	Unit	Test Method
Tear Strength			ISO 34-1
Across Flow	110	kN/m	
Flow	130	kN/m	
Impact	Nominal Value	Unit	Test Method
Charpy Unnotched Impact Strength			ISO 179/1eU
-30°C	No Break		
23°C	No Break		
Multi-Axial Instrumented Impact Energy (23°C)	40.0	J	ISO 6603-2
Multi-Axial Instrumented Impact Peak Force (23°C)	3300	N	ISO 6603-2
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	50.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	40.0	°C	ISO 75-2/A
Brittleness Temperature	-100	°C	ISO 974
Glass Transition Temperature ¹	-55.0	°C	ISO 11357-2
Melting Temperature ²	222	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.8E-4	cm/cm/°C	
Transverse	1.8E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	5.0E+14	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms · cm	IEC 60093
Electric Strength	20	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.60		
1 MHz	4.40		
Dissipation Factor			IEC 60250
100 Hz	7.0E-3		
1 MHz	0.023		
Flammability	Nominal Value	Unit	Test Method
Burning Rate ³ (1.00 mm)	23	mm/min	ISO 3795
Oxygen Index	22	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.00	g/cm ³	

Additional Information	Nominal Value	Unit	Test Method
Effective Thermal Diffusivity	0.0544	cSt	
Emission of Organic Compounds	2.70	μgC/g	VDA 277
Odor	5		VDA 270

NOTE

1. 10°C/min
2. 10°C/min
3. SE/B

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