

Hytrel® 6646 NC010

THERMOPLASTIC POLYESTER ELASTOMER

DuPont Performance Polymers

Message:

66 Shore D High Performance Polyester Elastomer

General Information			
Additive	UV Stabilizer		
Uses	Film		
	Profiles		
	Sheet		
Forms	Pellets		
Processing Method	Casting		
	Extrusion		
	Film Extrusion		
	Injection Molding		
	Profile Extrusion		
	Sheet Extrusion		
	Thermoforming		
Part Marking Code (ISO 11469)	>TPC-ET<		
Resin ID (ISO 1043)	TPC-ET		
Physical	Nominal Value	Unit	Test Method
Density	1.23	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (240°C/2.16 kg)	13	g/10 min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.4	%	
Flow	1.4	%	
Water Absorption			ISO 62
23°C, 24 hr, 2.00 mm	0.60	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	0.20	%	
Hardness	Nominal Value	Unit	Test Method
Shore Hardness			ISO 868
Shore D	66		
Shore D, 15 sec	60		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	310	MPa	ISO 527-2
Tensile Stress			ISO 527-2

Yield	20.0	MPa	
Break	35.0	MPa	
10% Strain	16.0	MPa	
100% Strain	20.0	MPa	
Tensile Strain			ISO 527-2
Yield	29	%	
Break	> 300	%	
Nominal Tensile Strain at Break	380	%	ISO 527-2
Tensile Creep Modulus			ISO 899-1
1 hr	260	MPa	
1000 hr	190	MPa	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-30°C	13	kJ/m ²	
23°C, Partial Break	110	kJ/m ²	
Charpy Unnotched Impact Strength (23°C)	No Break		ISO 179/1eU
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	87.0	°C	ISO 75-2/B
1.8 MPa, Unannealed	45.0	°C	ISO 75-2/A
Glass Transition Temperature ¹	0.00	°C	ISO 11357-2
Vicat Softening Temperature	100	°C	ISO 306/B50
Melting Temperature ²	211	°C	ISO 11357-3
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
1.50 mm	HB		
3.00 mm	HB		
Oxygen Index	21	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	
Melt Density	1.07	g/cm ³	
Specific Heat Capacity of Melt	2150	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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