

Hytrel® 8238

THERMOPLASTIC POLYESTER ELASTOMER

DuPont Performance Polymers

Message:

82 Shore D Standard Performance Polyester Elastomer

General Information			
UL YellowCard	E41938-258357		
Additive	UV Stabilizer		
Uses	Film		
	Profiles		
	Sheet		
Agency Ratings	UL Unspecified Rating		
Forms	Pellets		
Processing Method	Casting		
	Extrusion		
	Film Extrusion		
	Injection Molding		
	Profile Extrusion		
	Sheet Extrusion		
	Thermoforming		
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)		
	Shear Stress vs. Shear Rate (ISO 11403-1)		
	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	1.28	g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (240°C/2.16 kg)	13	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (240°C/2.16 kg)	11.5	cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.6	%	
Flow	1.6	%	

Water Absorption			
24 hr	0.30	%	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	76		
Shore D, 15 sec	70		
Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	1180	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Yield	36.0	MPa	
Break	46.0	MPa	
10% Strain	34.0	MPa	
50% Strain	28.0	MPa	
100% Strain	26.0	MPa	
Tensile Strain			ISO 527-2
Yield	19	%	
Break	> 300	%	
Nominal Tensile Strain at Break	340	%	ISO 527-2
Flexural Modulus	1150	MPa	ISO 178
Elastomers	Nominal Value	Unit	Test Method
Tear Strength			ISO 34-1
Across Flow	210	kN/m	
Flow	230	kN/m	
Impact	Nominal Value	Unit	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°C	5.0	kJ/m ²	
-30°C	5.0	kJ/m ²	
23°C	15	kJ/m ²	
Notched Izod Impact Strength			ISO 180/1A
-40°C	5.5	kJ/m ²	
23°C	11	kJ/m ²	
Tensile Impact Strength (23°C)	57.0	kJ/m ²	ISO 8256/1
Thermal	Nominal Value	Unit	Test Method
Heat Deflection Temperature			
0.45 MPa, Unannealed	105	°C	ISO 75-2/B
1.8 MPa, Unannealed	45.0	°C	ISO 75-2/A
Brittleness Temperature	-84.0	°C	ISO 974
Glass Transition Temperature ¹	50.0	°C	ISO 11357-2
Vicat Softening Temperature			
--	213	°C	ISO 306/A50

--	150	°C	ISO 306/B50
Melting Temperature ²	221	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.5E-4	cm/cm/°C	
Transverse	1.5E-4	cm/cm/°C	
Electrical	Nominal Value	Unit	Test Method
Surface Resistivity	> 1.0E+15	ohms	IEC 60093
Volume Resistivity	> 1.0E+15	ohms·cm	IEC 60093
Electric Strength	21	kV/mm	IEC 60243-1
Relative Permittivity			IEC 60250
100 Hz	4.00		
1 MHz	3.70		
Dissipation Factor			IEC 60250
100 Hz	0.010		
1 MHz	0.018		
Comparative Tracking Index	600	V	IEC 60112
Flammability	Nominal Value	Unit	Test Method
Flammability Classification			IEC 60695-11-10, -20
0.910 mm	HB		
1.50 mm	HB		
Oxygen Index	22	%	ISO 4589-2
Fill Analysis	Nominal Value	Unit	Test Method
Melt Density	1.13	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	
Emission of Organic Compounds	240	µgC/g	VDA 277
NOTE			
1.	10°C/min		
2.	10°C/min		

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