



Hytrel® 3078

Celanese Corporation - THERMOPLASTIC POLYESTER ELASTOMER

Thursday, February 6, 2025

General Information

Product Description

30 Shore D High Performance Polyester Elastomer with Non-discoloring Stabilizer

General

Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• UV Stabilizer		
Features	• UV Stabilized		
Automotive Specifications	• GM GMW15702-250037		
Forms	• Pellets		
Processing Method	• Calendering • Casting • Coating	• Extrusion • Film Extrusion • Injection Molding	• Sheet Extrusion • Thermoforming
Part Marking Code (ISO 11469)	• >TPC-ET<		
Resin ID (ISO 1043)	• TPC-ET		

ASTM & ISO Properties ¹

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density	1.07 g/cm ³	1.07 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	5.0 g/10 min	5.0 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (190°C/2.16 kg)	5.0 cm ³ /10min	5.0 cm ³ /10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	0.50 %	0.50 %	
Flow	0.80 %	0.80 %	
Water Absorption			ISO 62
24 hr, 73°F (23°C)	0.50 %	0.50 %	
Saturation, 73°F (23°C), 0.0787 in (2.00 mm)	0.80 %	0.80 %	
Equilibrium, 73°F (23°C), 0.0787 in (2.00 mm), 50% RH	0.20 %	0.20 %	
Mechanical	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Modulus	3190 psi	22.0 MPa	ISO 527-1/1BA/50
Tensile Stress			
10% Strain	261 psi	1.80 MPa	ISO 527-2
50% Strain	725 psi	5.00 MPa	ISO 527-2/1BA
Flexural Modulus	3920 psi	27.0 MPa	ISO 178
Poisson's Ratio	0.50	0.50	

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Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tear Strength			ISO 34-1
Across Flow	440 lbf/in	77.0 kN/m	
Flow	457 lbf/in	80.0 kN/m	
Impact	Typical Value (English)	Typical Value (SI)	Test Method
Charpy Notched Impact Strength			ISO 179/1eA
-40°F (-40°C)	No Break	No Break	
-22°F (-30°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Charpy Unnotched Impact Strength			ISO 179/1eU
-22°F (-30°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Notched Izod Impact Strength			ISO 180/1A
-40°F (-40°C)	No Break	No Break	
73°F (23°C)	No Break	No Break	
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Shore Hardness			ISO 48-4
Shore D ²	30	30	
Shore D, 15 sec	24	24	
Thermal	Typical Value (English)	Typical Value (SI)	Test Method
Brittleness Temperature	-144 °F	-98.0 °C	ISO 974
Melting Temperature ³	338 °F	170 °C	ISO 11357-3
CLTE			ISO 11359-2
Flow	9.8E-5 in/in/°F	1.8E-4 cm/cm/°C	
Transverse	1.1E-4 in/in/°F	2.1E-4 cm/cm/°C	
Effective Thermal Diffusivity - Flow	5.44E-8 mm ² /s	5.44E-8 mm ² /s	ISO 22007-4
Electrical	Typical Value (English)	Typical Value (SI)	Test Method
Surface Resistivity	1.0E+14 ohms	1.0E+14 ohms	IEC 62631-3-2
Volume Resistivity	1.0E+11 ohms·m	1.0E+11 ohms·m	IEC 62631-3-1
Electric Strength	460 V/mil	18 kV/mm	IEC 60243-1
Relative Permittivity			IEC 62631-2-1
100 Hz	5.40	5.40	
1 MHz	5.30	5.30	
Dissipation Factor			IEC 62631-2-1
100 Hz	7.0E-3	7.0E-3	
1 MHz	0.015	0.015	
Flammability	Typical Value (English)	Typical Value (SI)	Test Method
Burning Rate ⁴ (0.0394 in (1.00 mm))	1.3 in/min	33 mm/min	ISO 3795
Flame Rating			UL 94
0.06 in (1.5 mm)	HB	HB	IEC 60695-11-10,
0.12 in (3.0 mm)	HB	HB	-20
Oxygen Index	19 %	19 %	ISO 4589-2
FMVSS Flammability	B	B	FMVSS 302

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Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Melt Density	0.940 g/cm ³	0.940 g/cm ³	
Ejection Temperature	185 °F	85.0 °C	
Specific Heat Capacity of Melt	0.514 Btu/lb/°F	2150 J/kg/°C	ISO 22007-4
Thermal Conductivity of Melt	1.0 Btu·in/hr/ft ² /°F	0.15 W/m/K	ISO 22007-2

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	176 °F	80 °C
Drying Time - Desiccant Dryer	2.0 to 3.0 hr	2.0 to 3.0 hr
Suggested Max Moisture	< 0.080 %	< 0.080 %
Processing (Melt) Temp	374 to 410 °F	190 to 210 °C
Melt Temperature, Optimum	392 °F	200 °C
Mold Temperature	77 to 113 °F	25 to 45 °C
Mold Temperature, Optimum	95 °F	35 °C
Drying Recommended	yes	yes

Extrusion	Typical Value (English)	Typical Value (SI)
Drying Temperature	158 to 194 °F	70 to 90 °C
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr
Suggested Max Moisture	< 0.060 %	< 0.060 %
Melt Temperature	374 to 401 °F	190 to 205 °C
Extrusion Melt Temperature, Optimum	392 °F	200 °C

Notes

¹ Typical properties: these are not to be construed as specifications.

² max

³ 10°C/min

⁴ FMVSS 302

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