

DuPont Performance Polymers Hytrel® 4053FG NC010 Polyester Elastomer TPC-ET (Unverified Data**)

Category : Polymer , Thermoplastic , Polyester, TP , Polyester Thermoplastic Elastomer

Material Notes:

40 Shore D High Performance Polyester Elastomer Developed for Food Contact Applications Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Hytrel-4053FG-NC010-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.02 g/cc	0.0368 lb/in ³	
	1.16 g/cc	0.0419 lb/in ³	ISO 1183
Water Absorption	0.70 %	0.70 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.200 %	0.200 %	Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Flow	0.0020 cm/cm	0.0020 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.0040 cm/cm	0.0040 in/in	ISO 294-4 2577
Melt Flow	5.0 g/10 min	5.0 g/10 min	cm ³ /10min; ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	5.3 g/10 min	5.3 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	38	38	15s; ISO 868
Tensile Strength at Break	26.0 MPa	3770 psi	ISO 527-1/-2
Tensile Stress	2.40 MPa	348 psi	ISO 527-1/-2
	@Strain 5.00 %	@Strain 5.00 %	
	4.10 MPa	595 psi	ISO 527-1/-2
	@Strain 10.0 %	@Strain 10.0 %	
	7.30 MPa	1060 psi	

Mechanical Properties	Metric @Strain 50.0 %	English @Strain 50.0 %	ISO 527-1/-2 Comments
Elongation at Break	>= 300 %	>= 300 %	ISO 527-1/-2
Tensile Modulus	0.0560 GPa	8.12 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eU
Charpy Impact, Notched	NB	NB	ISO 179/1eA
	NB @Temperature -30.0 °C	NB @Temperature -22.0 °F	ISO 179/1eA
	NB @Temperature -40.0 °C	NB @Temperature -40.0 °F	ISO 179/1eA
Tensile Impact Strength	230 kJ/m ²	109 ft-lb/in ²	notched; ISO 8256/1
Tensile Creep Modulus, 1 hour	50.0 MPa @Time 3600 sec	7250 psi @Time 1.00 hour	ISO 899-1
Tensile Creep Modulus, 1000 hours	40.0 MPa @Time 3.60e+6 sec	5800 psi @Time 1000 hour	ISO 899-1
Tear Strength	110 kN/m	628 pli	parallel; ISO 34-1

Thermal Properties	Metric	English	Comments
CTE, linear, Parallel to Flow	220 µm/m-°C	122 µin/in-°F	ISO 11359-1/-2
CTE, linear, Transverse to Flow	220 µm/m-°C	122 µin/in-°F	ISO 11359-1/-2
Melting Point	150 °C	302 °F	10°C/min; ISO 11357-1/-3
Glass Transition Temp, Tg	-50.0 °C	-58.0 °F	10°C/min; ISO 11357-1/-2
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
Oxygen Index	20 %	20 %	ISO 4589-1/-2

Electrical Properties	Metric	English	Comments
Volume Resistivity	7.00e+12 ohm-cm	7.00e+12 ohm-cm	IEC 60093
Surface Resistance	2.00e+14 ohm	2.00e+14 ohm	IEC 60093

Electrical Properties	Metric	English	Comments
Dielectric Constant	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
	5.2	5.2	IEC 60250
Dielectric Strength	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
	18.0 kV/mm	457 kV/in	IEC 60243-1
Dissipation Factor	0.011	0.011	IEC 60250
	@Frequency 100 Hz	@Frequency 100 Hz	IEC 60250
Comparative Tracking Index	0.0525	0.0525	IEC 60250
	@Frequency 1.00e+6 Hz	@Frequency 1.00e+6 Hz	IEC 60250
Comparative Tracking Index	600 V	600 V	IEC 60112

Descriptive Properties	Value	Comments
Delivery Form	Pellets	
Eff. thermal diffusivity	5.44E-08 m ² /s	
Part Marking Code	>TPC-ET<	ISO 11469
Processing	Calandring	
	Casting	
	Coatable	
	Film Extrusion	
	Injection Moulding	
	Other Extrusion	
	Profile Extrusion	
	Sheet Extrusion	
	Thermoforming	
Regional Availability	Asia Pacific	
	Europe	
	Global	
	Near East/Africa	

Descriptive Properties	North America Value	Comments
	South and Central America	
Resin Identification	TPC-ET	ISO 1043
Special Characteristics	Light stabilised or stable to light	
UL recognition	UL	

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