

DuPont Performance Polymers Hytrel® 6646 NC010 Polyester Elastomer TPC-ET (Unverified Data**)

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

Material Notes:

66 Shore D High Performance Polyester Elastomer Information provided by DuPont Performance Polymers

Order this product through the following link:

http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Hytrel-6646-NC010-Polyester-Elastomer-TPC-ET-nbspUnverified-Data.php

Physical Properties	Metric	English	Comments
Density	1.07 g/cc	0.0387 lb/in ³	
	1.23 g/cc	0.0444 lb/in ³	ISO 1183
Water Absorption	0.60 %	0.60 %	DS; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Moisture Absorption	0.200 %	0.200 %	DS; Sim. to ISO 62
	@Thickness 2.00 mm	@Thickness 0.0787 in	
Linear Mold Shrinkage, Flow	0.014 cm/cm	0.014 in/in	ISO 294-4 2577
Linear Mold Shrinkage, Transverse	0.014 cm/cm	0.014 in/in	ISO 294-4 2577
Melt Flow	13 g/10 min	13 g/10 min	ISO 1133
	@Load 2.16 kg, Temperature 240 °C	@Load 4.76 lb, Temperature 464 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore D	60	60	15s; ISO 868
	<= 66	<= 66	ISO 868
Tensile Strength at Break	35.0 MPa	5080 psi	ISO 527-1/-2
Tensile Stress	16.0 MPa	2320 psi	ISO 527-1/-2
	@Strain 10.0 %	@Strain 10.0 %	
Tensile Strength, Yield	20.0 MPa	2900 psi	ISO 527-1/-2
	@Strain 100 %	@Strain 100 %	
Elongation at Break	>= 300 %	>= 300 %	ISO 527-1/-2
	380 %	380 %	Nominal; ISO 527-1/-2

Mechanical Properties	Metric	English	Comments
Tensile Modulus	0.310 GPa	45.0 ksi	ISO 527-1/-2
Charpy Impact Unnotched	NB	NB	ISO 179/1eU
Charpy Impact, Notched	11.0 J/cm ²	52.3 ft-lb/in ²	Partial; ISO 179/1eA
	1.30 J/cm ² @Temperature -30.0 °C	6.19 ft-lb/in ² @Temperature -22.0 °F	ISO 179/1eA
Tensile Creep Modulus, 1 hour	260 MPa @Time 3600 sec	37700 psi @Time 1.00 hour	ISO 899-1
Tensile Creep Modulus, 1000 hours	190 MPa @Time 3.60e+6 sec	27600 psi @Time 1000 hour	ISO 899-1

Thermal Properties	Metric	English	Comments
Specific Heat Capacity	2.15 J/g-°C	0.514 BTU/lb-°F	
Thermal Conductivity	0.150 W/m-K	1.04 BTU-in/hr-ft ² -°F	of melt
Melting Point	211 °C	412 °F	10°C/min; ISO 11357-1/-3
Deflection Temperature at 0.46 MPa (66 psi)	87.0 °C	189 °F	ISO 75-1/-2
Deflection Temperature at 1.8 MPa (264 psi)	45.0 °C	113 °F	ISO 75-1/-2
Vicat Softening Point	100 °C	212 °F	50°C/h 50N; ISO 306
Glass Transition Temp, Tg	0.000 °C	32.0 °F	10°C/min; ISO 11357-1/-2
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	IEC 60695-11-10
	HB @Thickness 3.00 mm	HB @Thickness 0.118 in	IEC 60695-11-10
Oxygen Index	21 %	21 %	ISO 4589-1/-2

Descriptive Properties	Value	Comments
Delivery Form	Pellets	
Eff. thermal diffusivity	5.44E-08 m ² /s	
Part Marking Code	>TPC-ET<	ISO 11469

Processing Descriptive Properties	Casting Value	Comments
	Film Extrusion	
	Injection Moulding	
	Other Extrusion	
	Profile Extrusion	
	Sheet Extrusion	
	Thermoforming	
Regional Availability	Asia Pacific	
	Europe	
	Global	
	Near East/Africa	
	North America	
	South and Central America	
Resin Identification	TPC-ET	ISO 1043
Special Characteristics	Light stabilised or stable to light	

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