DuPont™ Hytrel® 4068FG

DuPont Engineering Polymers - Thermoplastic Copolyester Elastomer

Monday, August 04, 2008

General Information

Product Description

Hytrel® 4068FG is a high performance thermoplastic polyester elastomer with food compliance specificity.

General

Material Status	• Commercial: Active	
Availability	• Europe	
Uses	• Non-specific Food Applications	
RoHS Compliance	• Contact Manufacturer	
Appearance	• Natural Color	
Forms	• Pellets	
Processing Method	• Extrusion	• Injection Molding
Part Marking Code (ISO 11469)	• >TPC-ET<	
Resin ID (ISO 1043)	• TPC-ET	

ASTM and ISO Properties [1]

Physical	Nominal Value (English)	Nominal Value (SI)	Test Method
Density	1.10 g/cm³	1.10 g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	8.5 g/10 min	8.5 g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (220°C/2.16 kg)	0.549 in³/10min	9.00 cm³/10min	ISO 1133
Molding Shrinkage (Flow)	0.0090 in/in	0.90 %	Internal Method
Water Absorption (73 °F (23 °C), Saturation)	0.70 %	0.70 %	ISO 62
Water Absorption			ISO 62
73 °F (23 °C), Equilibrium, 50 % RH	0.30 %	0.30 %	
Mechanical	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Tensile Modulus (73 °F (23 °C))	4350 psi	30.0 MPa	ISO 527-2
Tensile Stress (Break, 73 °F (23 °C))	3190 psi	22.0 MPa	ISO 527-2
Tensile Strain (Break, 73 °F (23 °C))	620 %	620 %	ISO 527-2
Flexural Modulus			ISO 178
-40 °F (-40 °C)	24900 psi	172 MPa	
73 °F (23 °C)	7980 psi	55.0 MPa	
212 °F (100 °C)	4060 psi	28.0 MPa	
Tensile Stress, 73 °F (23 °C) (10% Strain)	3.50 MPa	3.50 MPa	ISO 527-2
Impact	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-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	
Tensile Impact Strength (73 °F (23 °C))	69.0 ft·lb/in²	145 kJ/m²	ISO 8256

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Hardness	Nominal Value (English)	Nominal Value (SI)	Test Method
Durometer Hardness (Shore D)	40	40	ASTM D2240
Thermal	**Nominal Value (English)**	**Nominal Value (SI)**	**Test Method**
CLTE (Flow, 73 to 131 °F (23 to 55 °C))	0.00013 in/in/°F	0.00023 cm/cm/°C	ASTM E831
CLTE (Flow, 73 to 131 °F (23 to 55 °C))	0.00013 in/in/°F	0.00023 cm/cm/°C	ISO 11359-2
CLTE			ASTM E831
Transverse, 73 to 131 °F (23 to 55 °C)	0.00013 in/in/°F	0.00023 cm/cm/°C	
CLTE			ISO 11359-2
Transverse, 73 to 131 °F (23 to 55 °C)	0.00013 in/in/°F	0.00023 cm/cm/°C	
Additional Information	**Nominal Value (English)**	**Nominal Value (SI)**	
Additional Properties (Drying Recommended)	Yes	Yes	

Processing Information

Injection	Nominal Value (English)	Nominal Value (SI)
Drying Temperature	212 °F	100 °C
Drying Time	2.0 to 3.0 hr	2.0 to 3.0 hr
Suggested Max Moisture	0.080 %	0.080 %
Mold Temperature	86.0 to 104 °F	30.0 to 40.0 °C
Melt Temperature, Optimum		
Injection Molding	225 °C	225 °C
Mold Temperature, Optimum		
Injection Molding	40.0 °C	40.0 °C

Notes

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

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