



Tuesday, March 06, 2007

Hytel® G3548LDuPont Engineering Polymers - *Thermoplastic Copolyester Elastomer*

Unit System:

ActionsLegend ([Open](#))**General Information****Product Description**

Hytel® G3548L is a low modulus grade with nominal hardness of 35D. It contains non-discoloring stabilizer. It can be processed by many conventional thermoplastic processing techniques like injection molding and extrusion.

General		Test Method
Material Status	<ul style="list-style-type: none"> Commercial: Active 	
Availability	<ul style="list-style-type: none"> Sweden Norway Latvia Lithuania Ireland United Kingdom Finland Estonia Denmark 	
Test Standards Available	<ul style="list-style-type: none"> ASTM ISO 	
Additive	<ul style="list-style-type: none"> Antioxidant Heat Stabilizer 	
Features	<ul style="list-style-type: none"> Antioxidant Color Stability, Good Copolymer, Block 	<ul style="list-style-type: none"> General Purpose Hardness, Low Heat Stabilized
Uses	<ul style="list-style-type: none"> Automotive Applications Coating Applications Filaments Film Film, Cast Foam 	<ul style="list-style-type: none"> Hose Sheet Sporting Goods Tubing Wire & Cable Applications
Appearance	<ul style="list-style-type: none"> Beige, Light 	
Forms	<ul style="list-style-type: none"> Pellets 	
Processing Method	<ul style="list-style-type: none"> Casting Extrusion Extrusion Blow Molding Extrusion Coating Extrusion, Filament Extrusion, Profile Extrusion, Sheet 	<ul style="list-style-type: none"> Film, Blown Film, Cast Foam Processing Injection Blow Molding Injection Molding Injection Molding, Multi
Part Marking Code	<ul style="list-style-type: none"> >TPC-ET< 	ISO 11469
Resin ID	<ul style="list-style-type: none"> TPC-ET 	ISO 1043

ASTM and ISO Properties ¹

Physical	Nominal Value Unit	Test Method
Density -Specific Gravity	1.15 g/cm ³	ASTM D792
Density	1.15 g/cm ³	ISO 1183
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	10.0 g/10 min	ASTM D1238
Melt Mass-Flow Rate (MFR) (190°C/2.16 kg)	10.0 g/10 min	ISO 1133
Mold Shrink, Linear-Flow	0.0050 cm/cm	ASTM D955
Molding Shrinkage		ISO 294-4
(Across Flow, 2.00 mm)	1.00 %	
(Flow, 2.00 mm)	1.00 %	
Water Absorption @ 24 hrs (23 °C)	5.0 %	ASTM D570
Water Absorption 24h/23C	5.0 %	ISO 62
Mechanical	Nominal Value Unit	Test Method
Tensile Modulus (23 °C)	23.0 MPa	ISO 527-1, -2
Tensile Strength		ASTM D638
(23 °C)	5.0 % Strain: 1.70 MPa	
(23 °C)	10 % Strain: 2.60 MPa	
Tensile Strength @ Break (23 °C)	10.3 MPa	ASTM D638
Tensile Stress at Break (23 °C)	9.70 MPa	ISO 527-1, -2
Tensile Elongation @ Brk (23 °C)	200 %	ASTM D638
Tensile Strain at Break (23 °C)	240 %	ISO 527-1, -2
Flexural Modulus		ASTM D790
(-40 °C)	62.0 MPa	
(23 °C)	32.4 MPa	
(100 °C)	7.00 MPa	
Flexural Modulus		ISO 178
(-40 °C)	50.0 MPa	
(23 °C)	32.0 MPa	
(100 °C)	7.00 MPa	
Impact	Nominal Value Unit	Test Method
Charpy Notched Impact Strength (-30 °C) ²	No Break kJ/m ²	ISO 179
Notched Izod Impact		ASTM D256
(-40 °C)	No Break J/m	
(23 °C)	No Break J/m	
Notched Izod Impact Strength (-40 °C) ³	No Break kJ/m ²	ISO 180
Hardness	Nominal Value Unit	Test Method
Durometer Hardness (D Scale)	35	ASTM D2240
Shore Hardness		ISO 868
(Shore D)	35	
(Shore D (15 sec))	26	
Thermal	Nominal Value Unit	Test Method
Brittleness Temperature	-61.0 °C	ISO 974
Melting Temperature (DSC)	154 °C	ISO 3146
Melting Point	156 °C	DSC

CLTE, Flow (TMA)		ASTM E831
(23 to 55°C (73 to 130°F))	0.00018 cm/cm/°C	
(-40 to 23°C (-40 to 73°F))	0.00024 cm/cm/°C	
Coefficient of Linear Thermal Expansion, Flow		ISO 11359-1, -2
(23 to 55°C (73 to 130°F))	0.00018 cm/cm/°C	
(-40 to 23°C (-40 to 73°F))	0.00024 cm/cm/°C	
CLTE, Transverse (TMA)		ASTM E831
(-40 to 23°C (-40 to 73°F))	0.00022 cm/cm/°C	
(23 to 55°C (73 to 130°F))	0.00024 cm/cm/°C	
(55 to 120°C (130 to 248°F))	0.00031 cm/cm/°C	
Coefficient of Linear Thermal Expansion, Transverse		ISO 11359-1, -2
(-40 to 23°C (-40 to 73°F))	0.00022 cm/cm/°C	
(23 to 55°C (73 to 130°F))	0.00024 cm/cm/°C	
(55 to 120°C (130 to 248°F))	0.00031 cm/cm/°C	

Flammability	Nominal Value	Unit	Test Method
Flame Rating - UL			UL 94
(1.50 mm)		HB	
(3.00 mm)		HB	
Flammability Classification			IEC 60695-11-10, -20
(1.50 mm)		HB	
(3.00 mm)		HB	
UL 746			
UL 746	Nominal Value	Unit	Test Method
RTI Str			UL 746
(1.50 mm)	50.0	°C	
(3.00 mm)	50.0	°C	
RTI Imp			UL 746
(1.50 mm)	50.0	°C	
(3.00 mm)	50.0	°C	
RTI Elec			UL 746
(1.50 mm)	50.0	°C	
(3.00 mm)	50.0	°C	
Comparative Tracking Index (CTI) (3.00 mm)	600	V	UL 746

Additional Properties

The value listed as Melting Temperature, ISO 3146, was tested in accordance with ISO 11357-1/-3.

CTI, UL 746A, 3.0mm, 23°C: >600 V

Tensile Stress at 10% Strain, ISO 527, 23°C: 2.5 MPa

Processing Information

Injection	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	2.0 to 3.0	hr
Suggested Max Moisture	0.080	%
Mold Temperature	30.0 to 40.0	°C

Injection Notes

Drying Recommended: Yes
Drying Time, Dehumidified Dryer: 2-3 hr
Optimum Melt Temperature: 180 °C
Optimum Mold Temperature: 40 °C

Extrusion	Nominal Value Unit
Drying Temperature	80.0 °C
Drying Time	2.0 to 3.0 hr
Suggested Max Moisture	< 0.080 %

Extrusion Notes

Drying Time, Dehumidified Dryer: 2-3 hr
Optimum Melt Temperature: 190 °C

Notes

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

² Type 1, Edgewise, Notch A

³ Type 1, Notch A



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