Hytrel® HTR8223 BK320

THERMOPLASTIC POLYESTER ELASTOMER

DuPont Performance Polymers

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Technical Data

Product Description			
42 Shore D High Viscosity Polyester Elastomer Developed for Blow Molding			
General			
Material Status	• Commercial: Active		
Literature [1]	• Processing - Extrusion (English) • Processing - Injection Molding (English) • Processing (English) • Typical Processing for DuPont Engineering Polymers (English)		
Search for UL Yellow Card	• DuPont Performance Polymers • Hytrel®		
Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Additive	• Heat Stabilizer	• UV Stabilizer	
Features	• Heat Stabilized	• UV Stabilized	
Uses	• Blow Molding Applications		
RoHS Compliance	• Contact Manufacturer		
Forms	• Pellets		
Processing Method	• Blow Molding • Casting • Coating	• Extrusion • Film Extrusion • Injection Molding	• Profile Extrusion • Sheet Extrusion • Thermoforming
Multi-Point Data	• Coefficient of Thermal Expansion vs. Temperature (ISO 11403-1) • Isothermal Stress vs. Strain (ISO 11403-1) • Isothermal Stress vs. Strain (TPE) (ISO 11403-1) • Shear Modulus vs. Temperature (ISO 11403-1) • Shear Modulus vs. Temperature, Dynamic (ISO 11403-1) • Shear Stress vs. Shear Rate (ISO 11403-1) • Tensile Modulus vs. Temperature (ISO 11403-1) • Tensile Modulus vs. Temperature, Dynamic (ISO 11403-1) • Viscosity vs. Shear Rate (ISO 11403-2)		
Part Marking Code (ISO 11469)	• TPC-ET		
Resin ID (ISO 1043)	• TPC-ET		

Physical	Nominal Value	Unit	Test Method
Density	1.13	g/cm³	ISO 1183
Melt Mass-Flow Rate (MFR) (230°C/10.0 kg)	9.5	g/10 min	ISO 1133
Melt Volume-Flow Rate (MVR) (230°C/10.0 kg)	10.0	cm³/10min	ISO 1133
Molding Shrinkage			ISO 294-4
Across Flow	1.6	%	
Flow	1.6	%	
Water Absorption			ISO 62
24 hr, 23°C	0.60	%	
Saturation, 23°C, 2.00 mm	0.80	%	
Equilibrium, 23°C, 2.00 mm, 50% RH	0.20	%	

Mechanical	Nominal Value	Unit	Test Method
Tensile Modulus	• 75.0 • 70.0	MPa	ISO 527-2
Tensile Stress			ISO 527-2
Break	26.0	MPa	
5.0% Strain	3.50	MPa	
10% Strain	5.50	MPa	
50% Strain	10.0	MPa	
100% Strain	13.0	MPa	
300% Strain	19.0	MPa	

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Mechanical	Nominal Value	Unit	Test Method
Tensile Strain (Break)	> 300	%	ISO 527-2
Nominal Tensile Strain at Break	680	%	ISO 527-2
Flexural Modulus	79.0	MPa	ISO 178
Poisson's Ratio	0.49		ISO 527
Abrasion Resistance	22.0	mm³	ISO 4649
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tear Strength			ISO 34-1
Across Flow	130	kN/m	
Flow	120	kN/m	
Impact	**Nominal Value**	**Unit**	**Test Method**
Charpy Notched Impact Strength			ISO 179/1eA
-40°C, Partial Break	110	kJ/m²	
23°C	No Break		
Notched Izod Impact Strength			ISO 180/1A
-50°C	No Break		
23°C	No Break		
Hardness	**Nominal Value**	**Unit**	**Test Method**
Shore Hardness			ISO 7619
Shore D	42		
Shore D, 15 sec	38		
Thermal	**Nominal Value**	**Unit**	**Test Method**
Brittleness Temperature	-100	°C	ISO 974
Glass Transition Temperature [3]	-50.0	°C	ISO 11357-2
Melting Temperature [3]	195	°C	ISO 11357-3
CLTE			ISO 11359-2
Flow	1.7E-4	cm/cm/°C	
Transverse	1.7E-4	cm/cm/°C	
Effective Thermal Diffusivity	5.44E-8	m²/s	
Electrical	**Nominal Value**	**Unit**	**Test Method**
Surface Resistivity	2.0E+14	ohms	IEC 62631-3-2
Volume Resistivity	9.0E+10	ohms·m	IEC 62631-3-1
Electric Strength	18	kV/mm	IEC 60243-1
Dissipation Factor			IEC 62631-2-1
100 Hz	7.0E-3		
1 MHz	0.013		
Comparative Tracking Index	600	V	IEC 60112
Flammability	**Nominal Value**	**Unit**	**Test Method**
Burning Rate [4] (1.00 mm)	< 100	mm/min	ISO 3795
FMVSS Flammability	B		FMVSS 302
Fill Analysis	**Nominal Value**	**Unit**	
Melt Density	0.980	g/cm³	

Injection	Nominal Value	Unit
Drying Temperature	100	°C
Drying Time - Desiccant Dryer	3.0 to 4.0	hr
Suggested Max Moisture	0.080	%
Processing (Melt) Temp	220 to 240	°C
Melt Temperature, Optimum	230	°C
Mold Temperature	40 to 50	°C
Mold Temperature, Optimum	45	°C
Drying Recommended	yes	

Form No. TDS-71956-en

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Extrusion	Nominal Value	Unit
Suggested Max Moisture	0.060	%
Extrusion Melt Temperature, Optimum	235	°C

Notes

[1] These links provide you with access to supplier literature. We work hard to keep them up to date; however you may find the most current literature from the supplier.

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

[3] 10°C/min

[4] FMVSS 302

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Where to Buy

Supplier

DuPont Performance Polymers
Wilmington, DE USA
Telephone: 302-999-4592
Web: http://plastics.dupont.com/

Distributor

Biesterfeld Plastic GmbH
Biesterfeld Plastic GmbH is a Pan European distribution company. Contact Biesterfeld Plastic GmbH for availability of individual products by country.
Telephone: +49-40-32008-0
Web: http://www.biesterfeld-plastic.com/
Availability: Algeria, Austria, Belgium, Bosnia and Herzegovina, Brazil, Bulgaria, Croatia, Cyprus, Czech Republic, Egypt, France, Germany, Greece, Hungary, Italy, Libyan Arab Jamahiriya, Luxembourg, Mauritania, Morocco, Netherlands, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Switzerland, Tunisia, Turkey

CCC Plastics
Telephone: 800-465-6917
Web: http://www.cccplastics.com/
Availability: Canada

Distrupol Ltd
Distrupol Ltd is a Pan European distribution company. Contact Distrupol Ltd for availability of individual products by country.
Telephone: 08452003040
Web: http://www.distrupol.com/
Availability: Denmark, Finland, Ireland, Norway, Sweden, United Kingdom

PolyOne Distribution
PolyOne Distribution is a global distribution company. Contact PolyOne Distribution for availability of individual products by country.
Telephone: 800-894-4266
Web: http://polyonedistribution.com/
Availability: Global

Reseller

A Reseller is not a distributor authorized by the Supplier.

Shanghai Jingyang New Material Technology Co., Ltd
Telephone: +86-021-80394788; Mr. Zhou: +86-15821998203
Web: http://www.basfppsu.com/
Availability: Asia Pacific, China

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