



Hytrel® HTR8936 BK320 (PRELIMINARY)

THERMOPLASTIC POLYESTER ELASTOMER

Common features of Hytrel® thermoplastic polyester elastomer include mechanical and physical properties such as exceptional toughness and resilience, high resistance to creep, impact and flex fatigue, flexibility at low temperatures and good retention of properties at elevated temperatures. In addition, it resists many industrial chemicals, oils and solvents. Special grades include heat stabilised, flame retardant, food contact compliant, blow molding and extrusion grades. Concentrates offered include black pigments, UV protection additives, heat stabilisers, and flame retardants.

Hytrel® thermoplastic polyester elastomer is plasticiser free.

The good melt stability of Hytrel® thermoplastic polyester elastomer normally enables the recycling of properly handled production waste. If recycling is not possible, DuPont recommends, as the preferred option, incineration with energy recovery (-24 kJ/g of base polymer) in appropriately equipped installations. For disposal, local regulations have to be observed.

Hytrel® thermoplastic polyester elastomer typically is used in demanding applications in the automotive, fluid power, electrical/electronic, consumer goods, appliance and power tool, sporting goods, furniture, industrial and off-road transportation/equipment industry.

Hytrel® HTR8936 BK320 is a high viscosity thermoplastic polyester elastomer designed for blow moulding with superior acidity resistance and heat aging.

Product information

Resin Identification	TPC-ET	ISO 1043
Part Marking Code	>TPC-ET<	ISO 11469

Rheological properties

Melt mass-flow rate	4 g/10min	ISO 1133
Melt mass-flow rate, Temperature	240 °C	ISO 1133
Melt mass-flow rate, Load	10 kg	ISO 1133
Moulding shrinkage, parallel	1.9 %	ISO 294-4, 2577
Moulding shrinkage, normal	1.9 %	ISO 294-4, 2577

Typical mechanical properties

Tensile Modulus	168 MPa	ISO 527-1/-2
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Stress at 5% strain	7 ^[1] MPa	ISO 527-1/-2
Stress at 5% elongation	7 MPa	ISO 527-1/-2 or ISO 37
Stress at 10% elongation	11 MPa	ISO 527-1/-2 or ISO 37
Stress at 50% elongation	17 MPa	ISO 527-1/-2 or ISO 37
Stress at break	28 ^[1] MPa	ISO 527-1/-2
Strain at break	270 ^[1] %	ISO 527-1/-2
Flexural Modulus	176 MPa	ISO 178
Charpy notched impact strength, -30°C	148 kJ/m ²	ISO 179/1eA



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Charpy notched impact strength, -40°C	132 kJ/m ²	ISO 179/1eA
Izod notched impact strength, -40°C	109 kJ/m ²	ISO 180/1A
Poisson's ratio	0.49 -	
Shore D hardness, 15s	51 -	ISO 48-4
Shore D hardness, max	54 -	ISO 48-4
Tear strength, parallel	153 kN/m	ISO 34-1
Tear strength, normal	144 kN/m	ISO 34-1

[1]: measured on 1BA specimen pulled at 50mm/min

Thermal properties

Melting temperature, 10°C/min	203 °C	ISO 11357-1/-3
Vicat softening temperature, 50°C/h 10N	181 °C	ISO 306

Other properties

Density	1170 kg/m ³	ISO 1183
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Blow Molding

Drying Recommended	yes -
Drying Temperature	90 - 100 °C
Drying Time, Dehumidified Dryer	5 - 6 h
Processing Moisture Content	≤0.03 %
Melt Temperature Optimum	230 °C
Melt Temperature Range	225 - 240 °C
Mold Temperature Optimum	50 °C
Mold Temperature Range	30 - 70 °C

The above data are preliminary and are subject to change as additional data are developed on subsequent lots.

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