



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, we recommend, 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® HTR8808 BK316 is a high viscosity thermoplastic polyester elastomer designed for blow molding. It has very good mechanical properties at elevated temperatures and excellent resistance to most automotive fluids.

Product information

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

Rheological properties

Melt mass-flow rate	4 g	g/10min	ISO 1133
Melt mass-flow rate, Temperature	240 °	°C	
Melt mass-flow rate, Load	10 k	кg	
Intrinsic viscosity	1.1		ISO 307, 1628
Moulding shrinkage, parallel	2.4 ^[1] 9		ISO 294-4, 2577
Moulding shrinkage, normal	2.2 ^[2] 9	%	ISO 294-4, 2577
[1]: With minimum Hold Pressure (0.8 MPa): 3.6%			

[1]: With minimum Hold Pressure (0.8 MPa): 3.6% [2]: With minimum Hold Pressure (0.8MPa): 3.5%

Typical mechanical properties

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Tensile modulus	270	MPa	ISO 527-1/-2
Stress at 5% strain	11	MPa	ISO 527-1/-2
Stress at 10% strain	15	MPa	ISO 527-1/-2
Tensile stress at 50% strain, 1BA	19	MPa	ISO 527-1/-2
Tensile stress at break	33	MPa	ISO 527-1/-2
Nominal strain at break	300	%	ISO 527-1/-2
Tensile strain at break	260	%	ISO 527-1/-2
Flexural modulus		MPa	ISO 178
Charpy notched impact strength, 23°C	102 ^[P]	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -30°C	12	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -40°C	7	kJ/m²	ISO 179/1eA
Izod notched impact strength, -40°C	7.0	kJ/m²	ISO 180/1A
Poisson's ratio	0.48		
Brittleness temperature	-65	°C	ISO 974

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Shore D hardness, 15s	54	ISO 48-4 / ISO 868
Shore D hardness, max	60	ISO 868
Tear strength, parallel	140 kN/m	ISO 34-1
Tear strength, normal	130 kN/m	ISO 34-1
[P]: Partial Break		

Thermal properties

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Melting temperature, 10°C/min	215 °C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	15 °C	ISO 11357-1/-3
Temperature of deflection under load, 1.8 MPa	45 °C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	65 °C	ISO 75-1/-2
Vicat softening temperature, 50°C/h 50N	60 °C	ISO 306
Vicat softening temperature, 50°C/h 10N	195 °C	ISO 306
Coeff. of linear therm. expansion, parallel, -40-23°C	200 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion	210 E-6/K	ISO 11359-1/-2
(CLTE), parallel		
Coeff. of linear therm. expansion, normal, -40-23°C	180 E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE),	200 E-6/K	ISO 11359-1/-2
normal		
TGA curve	available	ISO 11359-1/-2

Flammability

FMVSS Class	В	ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	<80 mm/min	ISO 3795 (FMVSS 302)

Physical/Other properties

Density	1160 kg/m³	ISO 1183
Density of melt	980 ka/m³	

Blow Molding

Drying Recommended	yes
Drying Temperature	70 - 80 °C
Drying Time, Dehumidified Dryer	6-8 h
Processing Moisture Content	≤0.03 %
Melt Temperature Optimum	235 °C
Melt Temperature Range	230 - 240 °C
Swell ratio	1.7
Mold Temperature Optimum	50 °C
Mold Temperature Range	30 - 70 °C

Characteristics

Processing Blow Moulding

Delivery form Pellets

Special characteristics Light stabilised or stable to light, Heat stabilised or stable to heat

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Automotive

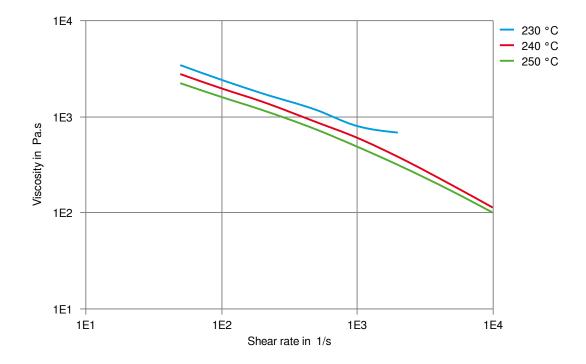
OEM

ADDITIONAL INFORMATION

General Motors

Part Specific Approval, Please Contact Your CE Representative For More Details.

Viscosity-shear rate



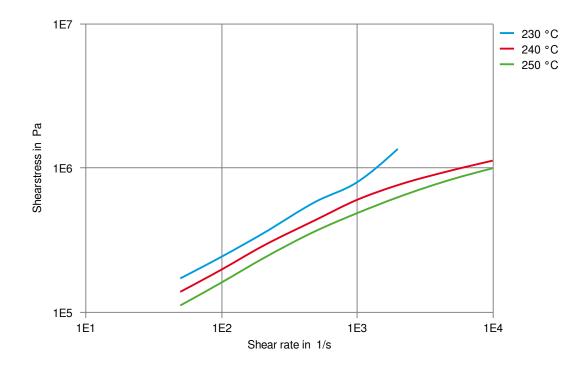
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Shearstress-shear rate



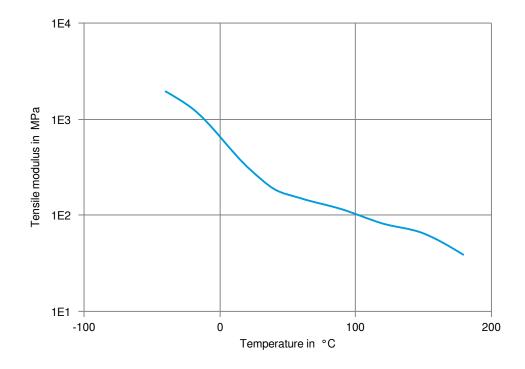
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Tensile modulus-temperature



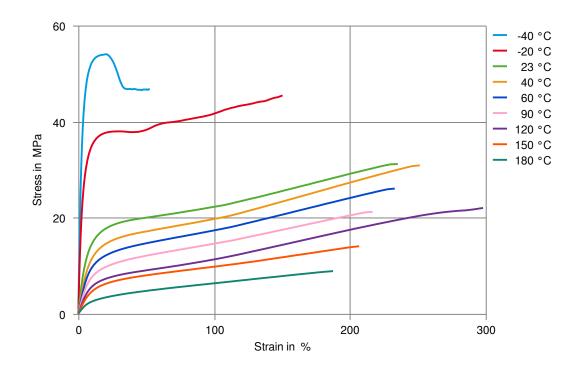
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Stress-Strain (Flexible Materials)



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Chemical Media Resistance

Acids

✓ Acetic Acid (5% by mass), 23°C

Symbols used:

✓ possibly resistant

Defined as: Supplier has sufficient indication that contact with chemical can be potentially accepted under the intended use conditions and expected service life. Criteria for assessment have to be indicated (e.g. surface aspect, volume change, property change).

★ not recommended - see explanation

Defined as: Not recommended for general use. However, short-term exposure under certain restricted conditions could be acceptable (e.g. fast cleaning with thorough rinsing, spills, wiping, vapor exposure).

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Revised: 2025-04-22 Source: Celanese Materials Database

NOTICE TO USERS: Values shown are based on testing of laboratory test specimens and represent data that fall within the standard range of properties for natural material. These values alone do not represent a sufficient basis for any part design and are not intended for use in establishing maximum, minimum, or ranges of values for specification purposes. Colourants or other additives may cause significant variations in data values. Properties of moulded parts can be influenced by a wide variety of factors including, but not limited to, material selection, additives, part design, processing conditions and environmental exposure. Other than those products expressly identified as medical grade (including by MT® product designation or otherwise), Celanese's products are not intended for use in medical or dental implants. Regardless of any such product designation, any determination of the suitability of a particular material and part design for any use contemplated by the users and the manner of such use is the sole responsibility of the users, who must assure themselves that the material as subsequently processed meets the needs of their particular product or use. To the best of our knowledge, the information contained in this publication is accurate; however, we do not assume any liability whatsoever for the accuracy and completeness of such information. The information contained in this publication should not be construed as a promise or guarantee of specific properties of our products. It is the sole responsibility of the users to investigate whether any existing patents are infringed by the use of the materials mentioned in this publication. Moreover, there is a need to reduce human exposure to many materials to the lowest practical limits in view of possible adverse effects. To the extent that any hazards may have been mentioned in this publication, we neither suggest nor guarantee that such hazards are the only ones that exist. We recommend that persons intending to rely on any recommendation or to use any e

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