Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

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® HTR8341C BK320 is designed for blow molding or processing techniques requiring high melt viscosity. It has nominal hardness of 40D, is pigmented black with fine particle size carbon black, and contains a general purpose stabilizer. It shows excellent mechanical properties at elevated temperatures, superior fatigue, abrasion, and grease resistance.

Product information

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

Rheological properties

Melt mass-flow rate	0.9[1]	g/10min	ISO 1133
Melt mass-flow rate, Temperature	230	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage, parallel	1.6	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.5	%	ISO 294-4, 2577

[1]: 10 g/10min at 230 Celsius @10kg

Typical mechanical properties

Tensile modulus	80	MPa	ISO 527-1/-2
Stress at 10% strain	6	MPa	ISO 527-1/-2
Tensile stress at 50% strain, 1BA	12	MPa	ISO 527-1/-2
Tensile stress at 100% strain	13	MPa	ISO 527-1/-2
Stress at 300% strain	23	MPa	ISO 527-1/-2
Tensile stress at break	28	MPa	ISO 527-1/-2
Nominal strain at break	350	%	ISO 527-1/-2
Tensile strain at break	>300	%	ISO 527-1/-2
Flexural modulus	80	MPa	ISO 178
Charpy impact strength, 23°C	N	kJ/m²	ISO 179/1eU
Charpy impact strength, -30°C	N	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	N	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -40°C	N	kJ/m²	ISO 179/1eA
Tensile notched impact strength, 23°C	300	kJ/m²	ISO 8256/1
Izod notched impact strength, 23°C	N	kJ/m²	ISO 180/1A

Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Poisson's ratio	0.49		
Brittleness temperature	-100[2]	°C	ISO 974
Shore D hardness, 15s	37		ISO 48-4 / ISO 868
Shore D hardness, max	40		ISO 868
Tear strength, parallel	110	kN/m	ISO 34-1
Tear strength, normal	120	kN/m	ISO 34-1

[2]: -77 °C measured according to ISO 812 / 2011

Tribological properties

Coefficient of static friction, against steel	0.2		ISO 8295

Thermal properties

Melting temperature, 10 °C/min	207	°C	ISO 11357-1/-3
Glass transition temperature, 1 Hz	-46	°C	ISO 6721
Freezing temperature, 10 °C/min	167	°C	ISO 11357-1/-2
Temperature of deflection under load, 1.8 MPa	42	°C	ISO 75-1/-2
Temperature of deflection under load, 0.45 MPa	56	°C	ISO 75-1/-2
Vicat softening temperature, 50 °C/h 10N	158	°C	ISO 306
Coeff. of linear therm. expansion, parallel, -40-23 °C	230	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), parallel	170	E-6/K	ISO 11359-1/-2
Coeff. of linear therm. expansion, normal, -40-23 °C	240	E-6/K	ISO 11359-1/-2
Coefficient of linear thermal expansion (CLTE), normal	200	E-6/K	ISO 11359-1/-2
Thermal conductivity of melt	0.16	W/(m K)	ISO 22007-2
Effective thermal diffusivity, flow	5.44E-8	m²/s	ISO 22007-4
Specific heat capacity of melt	2100	J/(kg K)	ISO 22007-4

Flammability

FMVSS Class	B		ISO 3795 (FMVSS 302)
Burning rate, Thickness 1 mm	17	mm/min	ISO 3795 (FMVSS 302)

Electrical properties

Dissipation factor, 100Hz	300	E-4	IEC 62631-2-1
Dissipation factor, 1MHz	95	E-4	IEC 62631-2-1
Volume resistivity	8E10	Ohm.m	IEC 62631-3-1
Surface resistivity	4E14	Ohm	IEC 62631-3-2
Electric strength	19	kV/mm	IEC 60243-1
Comparative tracking index	600		IEC 60112

Physical/Other properties

Humidity absorption, 2mm	0.2	%	Sim. to ISO 62
Water absorption, 2mm	0.5	%	Sim. to ISO 62
Density	1140	kg/m³	ISO 1183
Density of melt	990	kg/m³	

Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Injection

Drying Recommended	yes	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	3 - 4	h
Processing Moisture Content	≤0.08	%
Melt Temperature Optimum	240	°C
Min. melt temperature	230	°C
Max. melt temperature	250	°C
Mold Temperature Optimum	45	°C
Min. mould temperature	40	°C
Max. mould temperature	50	°C
Ejection temperature	154	°C

Blow Molding

Drying Temperature	≤110	°C
Processing Moisture Content	≤0.02	%

Characteristics

Processing	Injection Moulding, Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion, Coatable, Blow Moulding, Casting, Thermoforming
Delivery form	Pellets
Special characteristics	Light stabilised or stable to light, Heat stabilised or stable to heat

Automotive

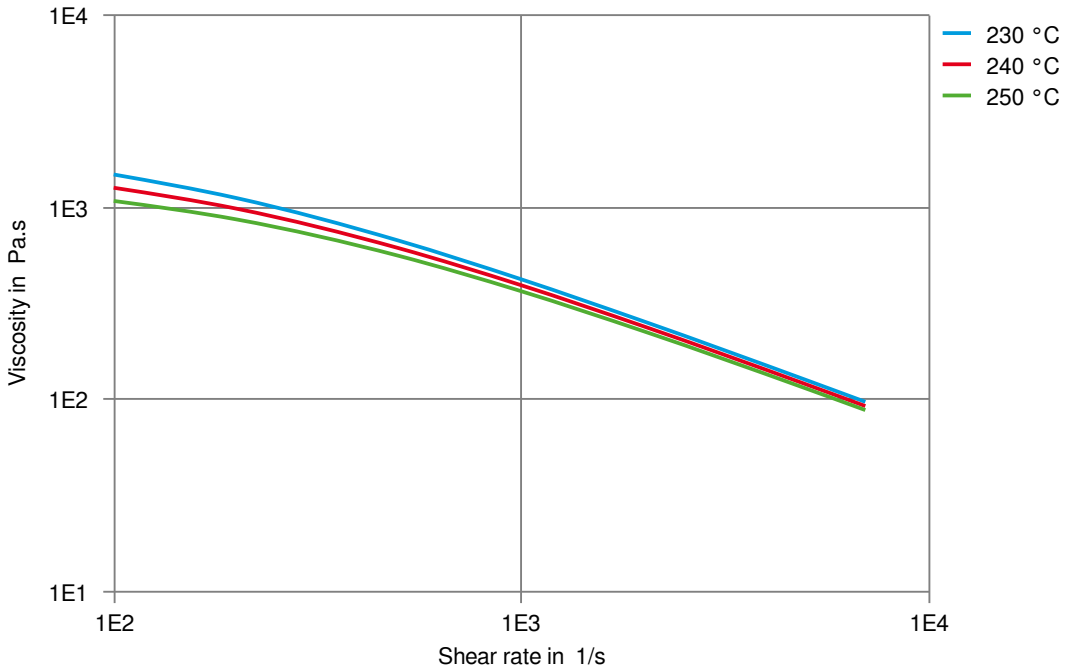
OEM	STANDARD	ADDITIONAL INFORMATION
Chery	Q/SQR S1-111-2012	
General Motors	GMW17479P-TPC-ET-Type 1A	
Hyundai	MS220-08 Type A	
Mercedes-Benz	DBL5562.15	
Mercedes-Benz	DBL5562.17	
Mercedes-Benz	DBL5562.31	
Mercedes-Benz	DBL5562.33	
Mercedes-Benz	DBL5562.34	
Mercedes-Benz	DBL5562.36	
Mercedes-Benz	DBL5562.50 TPC	
Stellantis	B62 0300 / 61/213M-215E (-)/13/J2/M5/Q1/R4/Z9	01994_15_00077
VW Group	TL 522 81-C TPC-ET	

Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Viscosity-shear rate

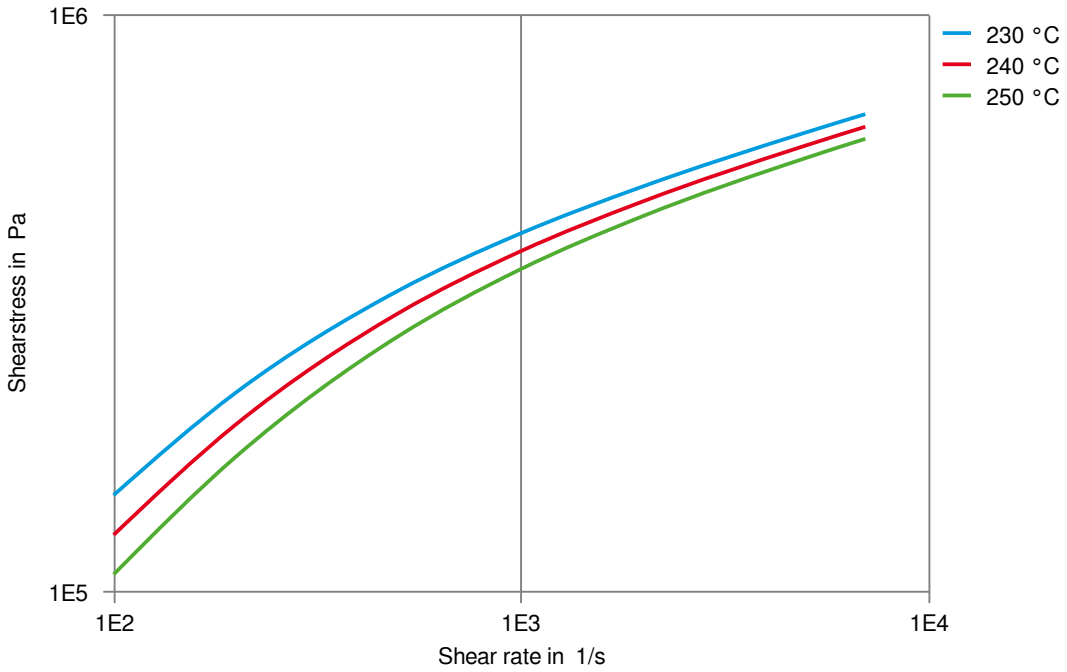


Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Shearstress-shear rate

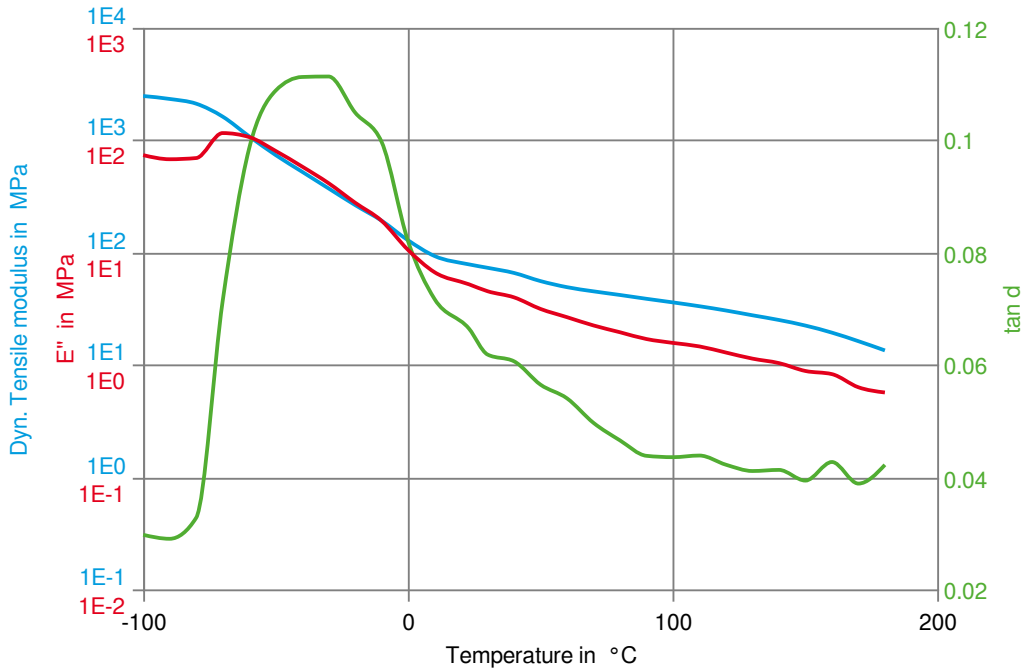


Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Dynamic Tensile modulus-temperature

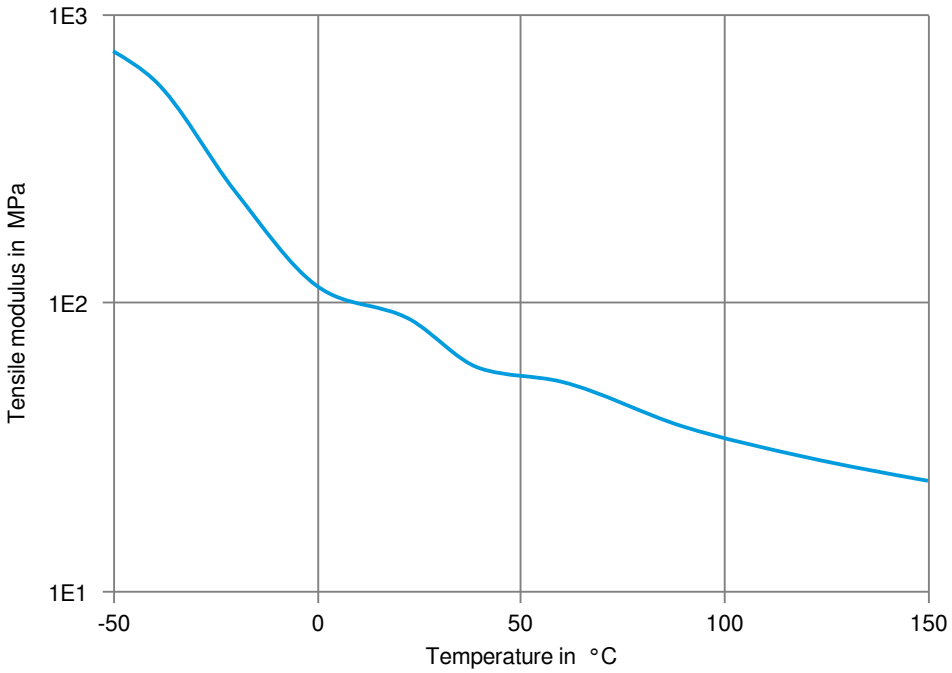


Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Tensile modulus-temperature

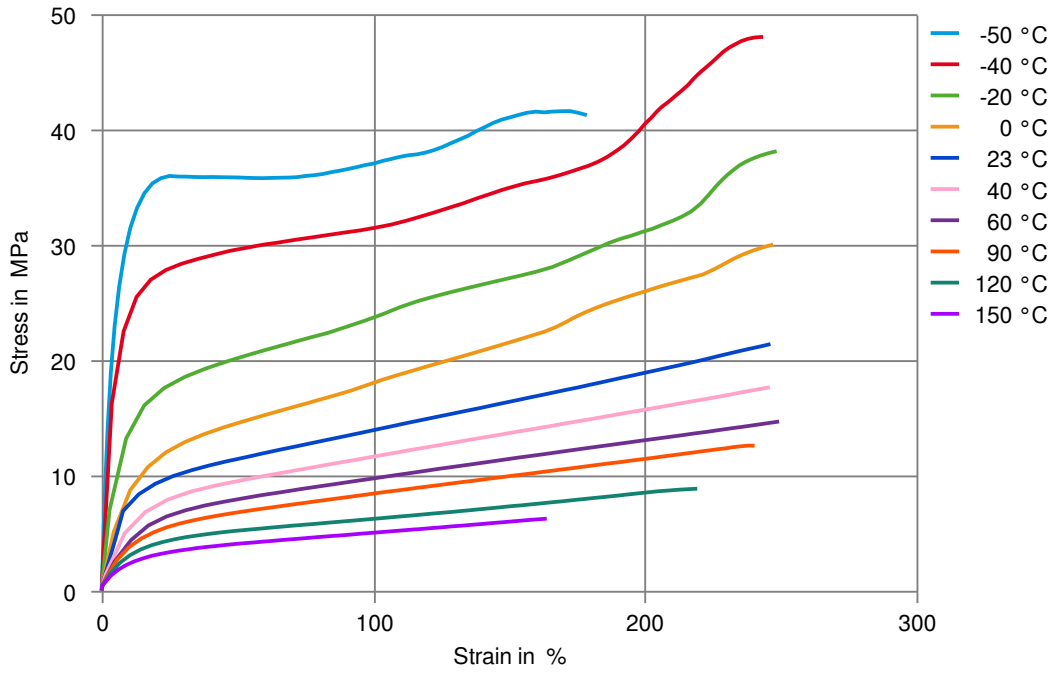


Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Stress-Strain (Flexible Materials)



Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Chemical Media Resistance

Acids

- ✔ Acetic Acid (5% by mass), 23°C
- ✔ Citric Acid solution (10% by mass), 23°C
- ✔ Lactic Acid (10% by mass), 23°C
- ✘ Hydrochloric Acid (36% by mass), 23°C
- ✘ Nitric Acid (40% by mass), 23°C
- ✘ Sulfuric Acid (38% by mass), 23°C
- ✔ Sulfuric Acid (5% by mass), 23°C
- ✘ Chromic Acid solution (40% by mass), 23°C

Bases

- ✔ Sodium Hydroxide solution (35% by mass), 23°C
- ✔ Sodium Hydroxide solution (1% by mass), 23°C
- ✔ Ammonium Hydroxide solution (10% by mass), 23°C

Alcohols

- ✔ Isopropyl alcohol, 23°C
- ✔ Methanol, 23°C
- ✔ Ethanol, 23°C

Hydrocarbons

- ✔ n-Hexane, 23°C
- ✔ Toluene, 23°C
- ✔ iso-Octane, 23°C

Ketones

- ✘ Acetone, 23°C

Ethers

- ✘ Diethyl ether, 23°C

Mineral oils

- ✔ SAE 10W40 multigrade motor oil, 23°C
- ✘ SAE 10W40 multigrade motor oil, 130°C
- ✘ SAE 80/90 hypoid-gear oil, 130°C
- ✔ Insulating Oil, 23°C
- ✘ Automatic hypoid-gear oil Shell Donax TX, 135°C

Standard Fuels

- ✘ ISO 1817 Liquid 1 - E5, 60°C
- ✘ ISO 1817 Liquid 2 - M15E4, 60°C
- ✘ ISO 1817 Liquid 3 - M3E7, 60°C
- ✘ ISO 1817 Liquid 4 - M15, 60°C
- ✔ Standard fuel without alcohol (pref. ISO 1817 Liquid C), 23°C
- ✔ Standard fuel with alcohol (pref. ISO 1817 Liquid 4), 23°C
- ✔ Diesel fuel (pref. ISO 1817 Liquid F), 23°C
- ✔ Diesel fuel (pref. ISO 1817 Liquid F), 90°C
- ✘ Diesel fuel (pref. ISO 1817 Liquid F), >90°C

Celanese
The chemistry inside innovation™

Hytrel® HTR8341C BK320

THERMOPLASTIC POLYESTER ELASTOMER

Salt solutions

- ✔ Sodium Chloride solution (10% by mass), 23°C
- ✘ Sodium Hypochlorite solution (10% by mass), 23°C
- ✔ Sodium Carbonate solution (20% by mass), 23°C
- ✔ Sodium Carbonate solution (2% by mass), 23°C
- ✔ Zinc Chloride solution (50% by mass), 23°C

Other

- ✔ Ethyl Acetate, 23°C
- ✘ Hydrogen peroxide, 23°C
- ✘ DOT No. 4 Brake fluid, 130°C
- ✘ Ethylene Glycol (50% by mass) in water, 108°C
- ✔ 1% nonylphenoxy-polyethyleneoxy ethanol in water, 23°C
- ✔ 50% Oleic acid + 50% Olive Oil, 23°C
- ✔ Water, 23°C
- ✘ Water, 90°C
- ✔ Phenol solution (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).

Revised: 2025-04-19 Source: Celanese Materials Database