

Product Texts

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® 4039 is a low modulus grade with nominal hardness of 40D and high fluidity. It contains non-discoloring stabilizer.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	22	cm ³ /10min	ISO 1133
Temperature	220	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	1.0	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.9	%	ISO 294-4, 2577
^[C] Density of melt	1100	kg/m ³	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Charpy impact strength, +23°C	N	kJ/m ²	ISO 179/1eU
^[C] Charpy impact strength, -30°C	N	kJ/m ²	ISO 179/1eU
^[C] Charpy notched impact strength, +23°C	N	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	N	kJ/m ²	ISO 179/1eA
^[C] Stress at 10% elongation	3.2	MPa	ISO 527
^[C] Stress at break TPE	29	MPa	ISO 527
^[C] Strain at break TPE	>300	%	ISO 527
^[C] Shore D hardness	33	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	193	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	-50	°C	ISO 11357-1/-2
^[C] Temp. of deflection under load, 0.45 MPa	49	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	220	E-6/K	ISO 11359-1/-2
^[C] Coeff. of linear therm. expansion, normal	200	E-6/K	ISO 11359-1/-2
^[C] Burning Behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
^[C] Oxygen index	20	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
^[C] Relative permittivity, 100Hz	4.8	-	IEC 62631-2-1
^[C] Relative permittivity, 1MHz	4.7	-	IEC 62631-2-1
^[C] Dissipation factor, 100Hz	130	E-4	IEC 62631-2-1
^[C] Dissipation factor, 1MHz	200	E-4	IEC 62631-2-1
^[C] Volume resistivity	4E10	Ohm*m	IEC 62631-3-1
^[C] Surface resistivity	3E14	Ohm	IEC 62631-3-2

Hytrell® 4039

TPC

Celanese

[C] Electric strength	18	kV/mm	IEC 60243-1
[C] Comparative tracking index	600	-	IEC 60112

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	0.7	%	Sim. to ISO 62
[C] Humidity absorption	0.3	%	Sim. to ISO 62
[C] Density	1110	kg/m ³	ISO 1183

[C]: CAMPUS

Film Properties	Value	Unit	Test Standard
ISO Data			
[C] WVTR, 23°C/85%r.h.	900	g/(m ² *d)	ISO 15106-1/-2
[C] Thickness of specimen	0.025	mm	-

[C]: CAMPUS

Characteristics**Processing**

Injection Molding, Coating, Casting, Thermoforming

Special Characteristics

Light stabilized or stable to light

Delivery form

Pellets

Features

Color Stability

Other text information**Profile extrusion****PREPROCESSING**

Drying temperature = 100°C

Drying time, dehumidified dryer = 2-3 h

Processing moisture content = <0.06 %

PROCESSING

Melt temperature range = 205-230°C

Melt temperature optimum = 215°C