

## 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® ECO 4039B is a low modulus grade with nominal hardness of 40D and high fluidity. It contains non-discoloring stabilizer. It has same performance and processing properties as Hytrel® 4039.**

Hytrel® ECO 4039B belongs to the Hytrel® ECO B family. The products of this family are partially produced using bio-feedstock derived from waste\*. This results in reduced lifecycle greenhouse gas emissions and lower fossil resource use.

\*certified bio-circular according to ISCC Plus mass balance approach.

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

[C]: CAMPUS

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

[C]: CAMPUS

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

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
<b>ISO Data</b>			
<sup>[C]</sup> Relative permittivity, 100Hz	4.8	-	IEC 62631-2-1
<sup>[C]</sup> Relative permittivity, 1MHz	4.7	-	IEC 62631-2-1

[C] Dissipation factor, 100Hz	<b>130</b>	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	<b>200</b>	E-4	IEC 62631-2-1
[C] Volume resistivity	<b>4E10</b>	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	<b>3E14</b>	Ohm	IEC 62631-3-2
[C] Electric strength	<b>18</b>	kV/mm	IEC 60243-1
[C] Comparative tracking index	<b>600</b>	-	IEC 60112

[C]: CAMPUS

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

[C]: CAMPUS

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

[C]: CAMPUS

**Characteristics**

**Processing**

Injection Molding, Coating, Casting, Thermoforming

**Features**

Color Stability

**Delivery form**

Pellets

**Certifications**

Contains renewable resources, ISCC Plus

**Special Characteristics**

Light stabilized or stable to light

**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