

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 6356B is a medium modulus grade with nominal hardness of 63D. It contains non-discoloring stabilizer. It can be processed by many conventional thermoplastic processing techniques like injection molding and extrusion. It has same performance and processing properties as Hytrel® 6356.

Hytrel® ECO 6356B 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.

Typical applications:

Hose and tubing, mandrels, wire and cable, film, profiles, seals, gears, sprockets, fuel tanks, containers with good permeation resistance to gases and liquids.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	8.5	cm ³ /10min	ISO 1133
Temperature	230	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	1.5	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	1.5	%	ISO 294-4, 2577
^[C] Density of melt	1060	kg/m ³	-
^[C] Thermal conductivity of melt	0.15	W/(m K)	-
^[C] Spec. heat capacity of melt	2150	J/(kg K)	-
^[C] Eff. thermal diffusivity	5.44E-8	m ² /s	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
^[C] Tensile Modulus	280	MPa	ISO 527
^[C] Tensile creep modulus, 1h	248	MPa	ISO 899-1
^[C] Tensile creep modulus, 1000h	182	MPa	ISO 899-1
^[C] Charpy notched impact strength, +23°C	120	kJ/m ²	ISO 179/1eA
^[C] Charpy notched impact strength, -30°C	25	kJ/m ²	ISO 179/1eA
^[C] Tensile notched impact strength, +23°C	300	kJ/m ²	ISO 8256/1
^[C] Stress at 10% elongation	15	MPa	ISO 527
^[C] Stress at 100% elongation	19	MPa	ISO 527
^[C] Stress at break TPE	43	MPa	ISO 527
^[C] Strain at break TPE	>300	%	ISO 527
^[C] Abrasion resistance	110	mm ³	ISO 4649
^[C] Shore D hardness	57	-	ISO 7619-1

[C]: CAMPUS

Thermal properties	Value	Unit	Test Standard
ISO Data			
^[C] Melting temperature, 10°C/min	210	°C	ISO 11357-1/-3
^[C] Glass transition temperature, 10°C/min	-5	°C	ISO 11357-1/-2

[C] Temp. of deflection under load, 1.80 MPa	45	°C	ISO 75-1/-2
[C] Temp. of deflection under load, 0.45 MPa	80	°C	ISO 75-1/-2
[C] Vicat softening temperature, B	100	°C	ISO 306
[C] Coeff. of linear therm. expansion, parallel	190	E-6/K	ISO 11359-1/-2
[C] Coeff. of linear therm. expansion, normal	176	E-6/K	ISO 11359-1/-2
[C] Burning Behav. at 1.5 mm nom. thickn.	HB	class	IEC 60695-11-10
Thickness tested	1.5	mm	-
Yellow Card available	yes	-	-
[C] Burning Behav. at thickness h	HB	class	IEC 60695-11-10
Thickness tested	3.0	mm	-
Yellow Card available	yes	-	-
[C] Oxygen index	21	%	ISO 4589-1/-2

[C]: CAMPUS

Electrical properties	Value	Unit	Test Standard
ISO Data			
[C] Relative permittivity, 100Hz	4.6	-	IEC 62631-2-1
[C] Relative permittivity, 1MHz	4.1	-	IEC 62631-2-1
[C] Dissipation factor, 100Hz	120	E-4	IEC 62631-2-1
[C] Dissipation factor, 1MHz	360	E-4	IEC 62631-2-1
[C] Volume resistivity	8E11	Ohm*m	IEC 62631-3-1
[C] Surface resistivity	>1E15	Ohm	IEC 62631-3-2
[C] Electric strength	20	kV/mm	IEC 60243-1

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Water absorption	0.6	%	Sim. to ISO 62
[C] Humidity absorption	0.2	%	Sim. to ISO 62
[C] Density	1220	kg/m ³	ISO 1183

[C]: CAMPUS

Characteristics

Processing

Injection Molding, Film Extrusion, Profile Extrusion, Sheet Extrusion, Other Extrusion, Casting, Thermoforming

Features

Color Stability

Delivery form

Pellets

Certifications

Contains renewable resources, ISCC Plus

Special Characteristics

Light stabilized or stable to light