

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® RS 40F5 NC010 is a low modulus grade containing at least 50% renewably sourced ingredients by weight. It can be processed by many conventional thermoplastic processing techniques such as injection molding and extrusion.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
^[C] Melt volume-flow rate, MVR	9	cm ³ /10min	ISO 1133
Temperature	220	°C	-
Load	2.16	kg	-
^[C] Molding shrinkage, parallel	0.9	%	ISO 294-4, 2577
^[C] Molding shrinkage, normal	0.7	%	ISO 294-4, 2577
^[C] Eff. thermal diffusivity	5.44E-8	m ² /s	-

[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	3.5	MPa	ISO 527
^[C] Stress at break TPE	25	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	190	°C	ISO 11357-1/-3
^[C] Temp. of deflection under load, 0.45 MPa	50	°C	ISO 75-1/-2
^[C] Coeff. of linear therm. expansion, parallel	210	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
Thickness tested	1.5	mm	-
^[C] Oxygen index	20	%	ISO 4589-1/-2

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
^[C] Density	1110	kg/m ³	ISO 1183
Biobased content	50	%	-

[C]: CAMPUS

Characteristics**Processing**

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

Delivery form

Pellets, Natural Color

Certifications

Contains renewable resources

Regional Availability

North America, Europe, Asia Pacific, South and Central America, Near East/Africa