Hytrel® HTR8163HVBK

TPC — Celanese

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® HTR8163HVBK is a 65 nom. Shore D, heat stabilised, plasticiser free high performance resin for extrusion; low temperature impact, excellent heat ageing, fatigue and crack propagation resistance; for air brake tubes.

Processing/Physical Characteristics	Value	Unit	Test Standard
ISO Data			
[C] Melt volume-flow rate, MVR	**5**	cm³/10min	ISO 1133
Temperature	**230**	°C	-
Load	**2.16**	kg	-
[C] Molding shrinkage, parallel	**1.9**	%	ISO 294-4, 2577
[C] Molding shrinkage, normal	**1.8**	%	ISO 294-4, 2577
[C] Density of melt	**1060**	kg/m³	-
[C] Thermal conductivity of melt	**0.16**	W/(m K)	-
[C] Spec. heat capacity of melt	**2090**	J/(kg K)	-

[C]: CAMPUS

Mechanical properties	Value	Unit	Test Standard
ISO Data			
[C] Tensile Modulus	**340**	MPa	ISO 527
[C] Tensile creep modulus, 1h	**310**	MPa	ISO 899-1
[C] Tensile creep modulus, 1000h	**260**	MPa	ISO 899-1
[C] Charpy notched impact strength, +23°C	**130**	kJ/m²	ISO 179/1eA
[C] Charpy notched impact strength, -30°C	**12**	kJ/m²	ISO 179/1eA
[C] Stress at 10% elongation	**17.5**	MPa	ISO 527
[C] Stress at 100% elongation	**23**	MPa	ISO 527
[C] Stress at 300% elongation	**32**	MPa	ISO 527
[C] Stress at break TPE	**44**	MPa	ISO 527
[C] Strain at break TPE	**>300**	%	ISO 527
[C] Abrasion resistance	**110**	mm³	ISO 4649
[C] Shore D hardness	**60**	-	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] Temp. of deflection under load, 0.45 MPa	**85**	°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	**170**	E-6/K	ISO 11359-1/-2
[C] Burning rate, FMVSS, Thickness 1 mm	**17**	mm/min	ISO 3795 (FMVSS 302)

[C]: CAMPUS

Other properties	Value	Unit	Test Standard
[C] Density	**1230**	kg/m³	ISO 1183

[C]: CAMPUS

Characteristics

Processing
Pipe/Tube Extrusion, Profile Extrusion, Other Extrusion

Delivery form
Pellets, Black

Special Characteristics
U.V. stabilized or stable to weather, Heat stabilized or stable to heat

Features
Fatigue Resistance

Chemical Resistance
Environmental Stress Crack Resistance

Regional Availability
North America, Europe, Asia Pacific, South and Central America

Other text information

Profile extrusion
Allows higher extrusion speed than HTR8620