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Hytrel® HTR8801 NC020

THERMOPLASTIC POLYESTER ELASTOMER

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® HTR8801 NC020 is a high viscosity, low modulus grade with improved heat, UV and hydrolysis resistance developed for extrusion applications.

Product information

Resin Identification	TPC-ET		ISO 1043
Part Marking Code	>TPC-ET<		ISO 11469

Rheological properties

Melt mass-flow rate	2	g/10min	ISO 1133
Melt mass-flow rate, Temperature	230	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage, parallel	1.5	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.5	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	55	MPa	ISO 527-1/-2
Stress at 10% strain	4	MPa	ISO 527-1/-2
Tensile stress at break	22	MPa	ISO 527-1/-2
Tensile strain at break	300	%	ISO 527-1/-2
Flexural modulus	55	MPa	ISO 178
Charpy notched impact strength, -40°C	130	kJ/m²	ISO 179/1eA
Poisson's ratio	0.5		
Shore D hardness, 15s	38		ISO 48-4 / ISO 868

Thermal properties

Melting temperature, 10°C/min	206	°C	ISO 11357-1/-3
Glass transition temperature, 10°C/min	-39	°C	ISO 11357-1/-3

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Physical/Other properties

Density	1140	kg/m³	ISO 1183

Injection

Drying Recommended	yes	
Drying Temperature	100	°C
Drying Time, Dehumidified Dryer	2 - 3	h
Processing Moisture Content	≤0.08	%
Melt Temperature Optimum	240	°C
Min. melt temperature	230	°C
Max. melt temperature	250	°C
Mold Temperature Optimum	45	°C
Min. mould temperature	45	°C
Max. mould temperature	55	°C

Extrusion

Drying Temperature	100 - 110	°C
Drying Time, Dehumidified Dryer	2 - 3	h
Processing Moisture Content	≤0.06	%
Melt Temperature Optimum	230	°C
Melt Temperature Range	220 - 240	°C

Characteristics

Processing	Film Extrusion, Extrusion, Sheet Extrusion, Other Extrusion
Delivery form	Pellets
Special characteristics	Light stabilised or stable to light, U.V. stabilised or stable to weather, Heat stabilised or stable to heat, Hydrolysis resistant

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