Celanese
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Hytrel® HTR8874 GY086

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® HTR8874 GY086 is a high modulus, high performance polyester elastomer.

Rheological properties

Melt mass-flow rate	31	g/10min	ISO 1133
Melt mass-flow rate, Temperature	240	°C	
Melt mass-flow rate, Load	2.16	kg	
Moulding shrinkage, parallel	1.4	%	ISO 294-4, 2577
Moulding shrinkage, normal	1.3	%	ISO 294-4, 2577

Typical mechanical properties

Tensile modulus	780	MPa	ISO 527-1/-2
Tensile stress at yield	25	MPa	ISO 527-1/-2
Tensile strain at yield	21	%	ISO 527-1/-2
Stress at 10% strain	21	MPa	ISO 527-1/-2
Tensile stress at break	36	MPa	ISO 527-1/-2
Nominal strain at break	440	%	ISO 527-1/-2
Tensile strain at break	>300	%	ISO 527-1/-2
Flexural modulus	800	MPa	ISO 178
Charpy impact strength, 23°C	N	kJ/m²	ISO 179/1eU
Charpy impact strength, -40°C	N	kJ/m²	ISO 179/1eU
Charpy notched impact strength, 23°C	79.5[P]	kJ/m²	ISO 179/1eA
Charpy notched impact strength, -40°C	19	kJ/m²	ISO 179/1eA
Poisson's ratio	0.46		
Shore D hardness, 15s	56		ISO 48-4 / ISO 868
Shore D hardness, max	59		ISO 868

[P]: Partial Break

Thermal properties

Melting temperature, 10°C/min	221	°C	ISO 11357-1/-3

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Physical/Other properties

Density	1220	kg/m³	ISO 1183

Injection

Drying Temperature	120	°C
Drying Time, Dehumidified Dryer	2 - 4	h
Processing Moisture Content	≤0.04	%
Melt Temperature Optimum	250	°C
Min. melt temperature	240	°C
Max. melt temperature	250	°C
Mold Temperature Optimum	45	°C
Min. mould temperature	45	°C
Max. mould temperature	55	°C
Ejection temperature	161	°C

Characteristics

Processing	Injection Moulding
Delivery form	Pellets
Special characteristics	Light stabilised or stable to light

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