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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 |
| Yield stress | 25 | MPa | ISO 527-1/-2 |
| Yield strain | 21 | % | ISO 527-1/-2 |
| Stress at 10% strain | 21 | MPa | ISO 527-1/-2 |
| Stress at break | 36 | MPa | ISO 527-1/-2 |
| Nominal strain at break | 440 | % | ISO 527-1/-2 |
| 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 | 80[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

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## Thermal properties

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

## 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 | Internal |
| Min. melt temperature | 240 | °C | |
| Mold Temperature Optimum | 45 | °C | |