DISTRUPOL℠

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Hytrel® Thermoplastic Elastomer

from Distrupol - your world class supplier of DuPont™ polymers

Hytrel® combines the flexibility of rubber with the strength and processability of thermoplastics. It is a versatile, resilient and durable copolyester, preferred by manufacturers for its resilience, heat and chemical resistance with strength and durability. The various grades of Hytrel exhibit a wide range of flexibility/stiffness and processing capabilities.

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Distrupol, your supply partner for DuPont Performance Materials. Contact us today to find out more!

DUPONT™

Authorized Distributor

Distrupol is a world class supplier of DuPont™ polymers, offering a wide range of innovative solutions across multiple industries.

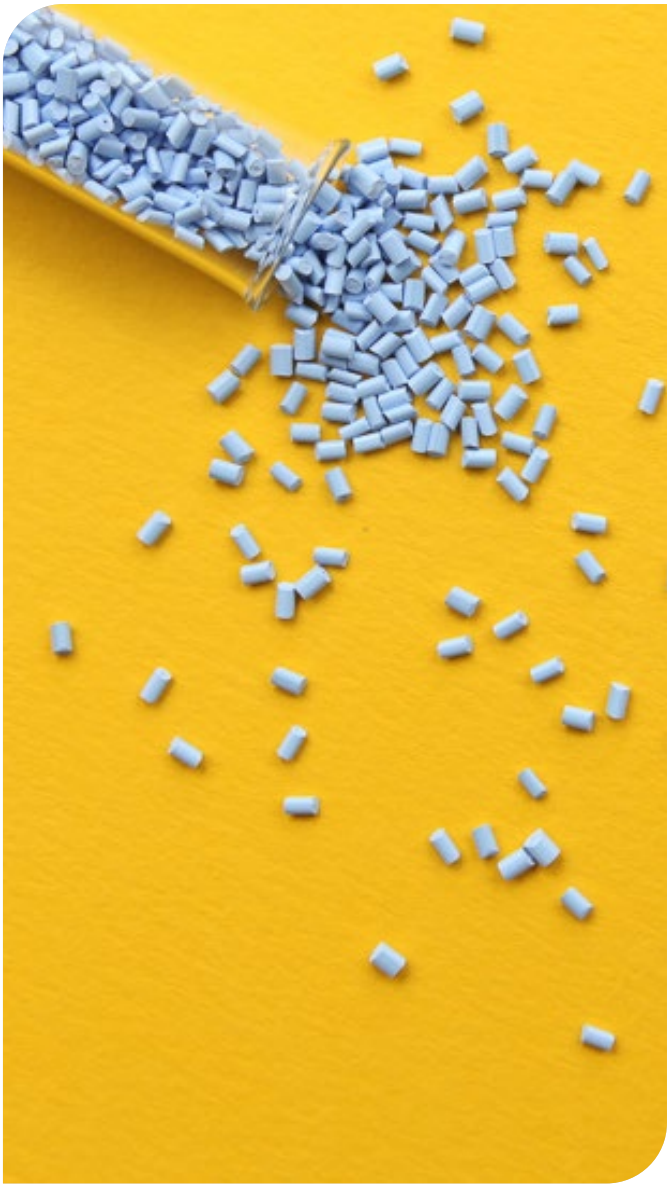
Distrupol and key supply partner DuPont™ have been providing revolutionary polymer solutions to designers, moulders and OEMs across Europe for over 40 years. With the scientific innovation and expertise of DuPont™, and the technical knowledge and commercial experience of Distrupol, we provide a fully integrated approach to our customers' polymer projects.

Technical Support:

With over 50 years of experience and knowledge, we understand the many requirements, considerations and specifications that a project can have. We can help select a 'fit for purpose' solution for your application, recommending the most suitable material(s) and enabling you to get it right first time. Our development engineers can support you with conceptual design, mould flow and tooling, material sampling and process optimisation.

Quality, Certification, Traceability and Confidence:

Material authenticity and traceability is critical when it comes to the manufacture of your components. We can supply certificates of conformity and analysis, and full traceability with every delivery, giving you, and your moulders, confidence that you're using a certified and in-specification material.



An introduction to Hytrel®

Hytrel is a TPC-ET thermoplastic polyester elastomer. As a versatile copolyester, it combines resilience and chemical resistance with strength and durability across a wide temperature range. Hytrel provides the flexibility of rubber, the strength of engineering plastic and processability of thermoplastic. Hytrel is available in a full range of Shore D hardnesses.

Hytrel can also be used to enhance properties when added to/blended with materials such as PVC, ABS and PBT.

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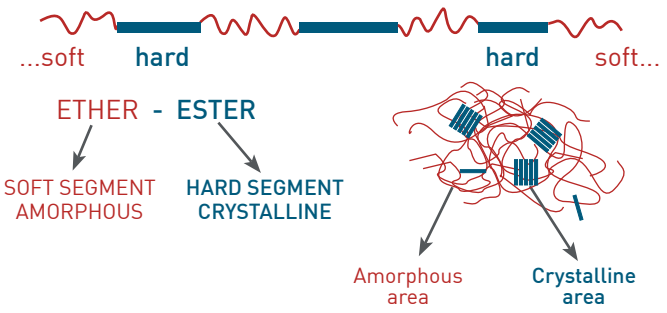
Chemistry

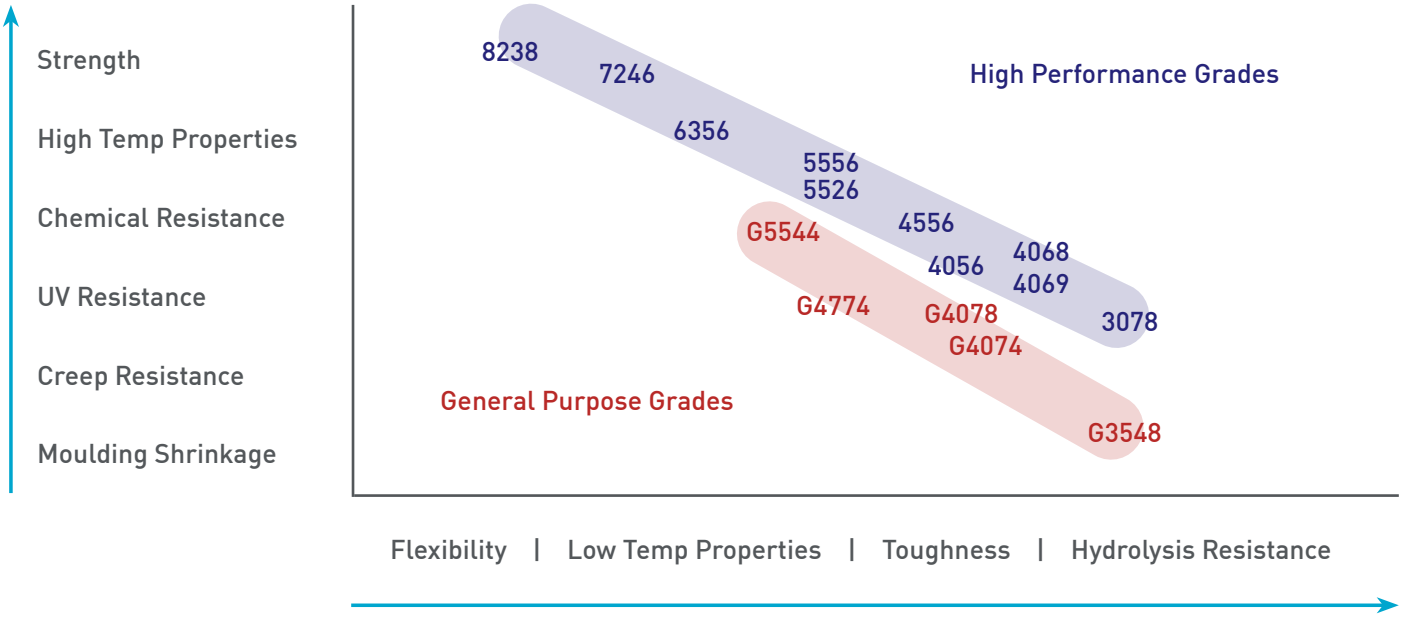
Hytrel is identified as TPC-ET (thermoplastic polyester elastomer) according to ISO 1043. It is a block copolymer, consisting of a hard (crystalline) segment of polybutylene terephthalate and a soft (amorphous) segment based on polyether chemistry. Properties are determined by the ratio of hard to soft segments and by the composition of the segments.

Hytrel grades are inherently flexible; they do not contain plasticiser. The Hytrel product line contains grades with ASTM D2240 peak Shore D hardness ranging from 30 to 80 (24 to 70 per ISO 868, 15 sec).

Block Copolymer



Product Positioning



Range Overview

SERIES	DESCRIPTION	MODIFIED GRADES AVAILABLE
Hytrel G	General purpose grades of TPC-ET. These grades offer the best balance of properties and cost.	Low modulus, light protection
Hytrel	High performance grades of TPC-ET. These grades provide an extra measure of strength or serviceability in the most demanding applications and can be used in light-coloured parts.	Food grades, powder form, heat stabilised
Hytrel HTR	Specialty grades of TPC-ET. This family includes grades with enhanced properties or processing characteristics for specific applications.	Pigmented black, superior fatigue resistance
Hytrel PC / SC	TPC-ET certified for healthcare applications.	Premium Control, Special Control
Hytrel Concentrates	Additive-containing concentrates to be blended with other Hytrel resins to enhance specific properties.	UV light stabiliser, heat stabiliser, carbon black, flame retardant, lubricant

Product Properties

Toughness and Resilience

Hytrel flexes and recovers, providing excellent flex fatigue resistance, hysteresis and spring-like properties, in addition to exceptional toughness, impact resistance and creep resistance.

Wide Temperature Range

Hytrel exhibits great flexibility at low temperatures, and good retention of mechanical properties at high temperatures.

Resistance to Chemicals

Hytrel stands up to oils, fuels, hydrocarbon solvents and many other chemicals.

Economical Processing

Hytrel can be moulded by injection, blow or rotational techniques. It can be extruded into tubes, profiles, fibres/filaments, sheet, blown or cast film, web coating, nonwovens and wire and cable jacketing. The design and manufacturing flexibility of Hytrel often results in lighter weight and lower cost parts versus rubbers and other elastomers.

Versatility

The Hytrel portfolio offers a wide variety of combinations of flexibility, mechanical performance, processing characteristics and other properties. There are no plasticisers or extenders to leach out over time. Parts made with Hytrel resin can flex in multiple directions, cycle after cycle, long after rubber would break.

Applications

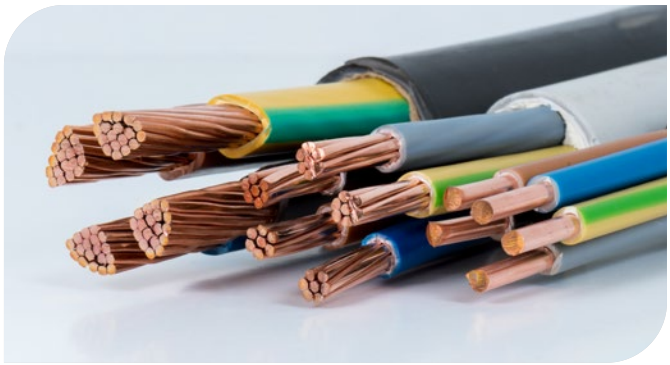
Hytrel is widely used in the following application areas:

- Chassis suspension systems
- Food contact materials
- Innovative furniture design
- Mechanical gears
- Medical device materials
- Mobile phone housing and components
- Plastics for sporting goods
- Polymers for oil and gas
- Railway technology for the long haul
- Seals and gaskets
- Thermoplastic tubing and elastomeric hose

Examples

The combination of low flex fatigue and high stress resistance provided by Hytrel makes it perfect for the requirements of prosthetics.

Hytrel is used in many automotive parts and systems, including in the airbag deployment area of steering wheels.



There are many industrial applications for Hytrel, including seals, connectors, fasteners and jacketing for cables.