SOLUTION SHOWCASE

Celanese

CELANESE HYTREL® TPC-ET 5033FG PROVIDES IDEAL BALANCE BETWEEN STIFFNESS AND FLEXIBILITY FOR COSMETICS BRUSHES AND APPLICATORS

When it comes to cosmetics, user experience can mean the difference between a consumer choosing your product and passing it over. For cosmetic applicator pads and brushes as irresistible as your cosmetics, Celanese Hytrel® TPC-ET 5033FG provides beauty, a soft feel, and easy application.

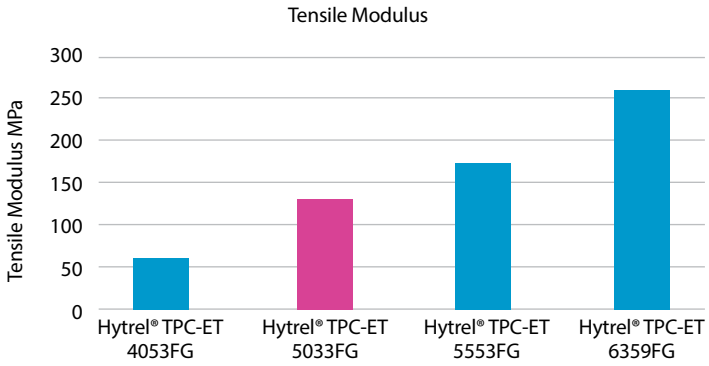
HYTREL® TPC-ET 5033FG EXCELS FOR COSMETICS BRUSHES AND APPLICATORS

Hytrel® TPC-ET 5033FG is a medium modulus thermoplastic elastomer that fills a gap in Shore D material selections. Its combination of stiffness and flexibility make it ideal for mascara brushes and lip gloss applicators. With a non-discoloring stabilizer, it is recommended for injection molding applications requiring high-flow properties.

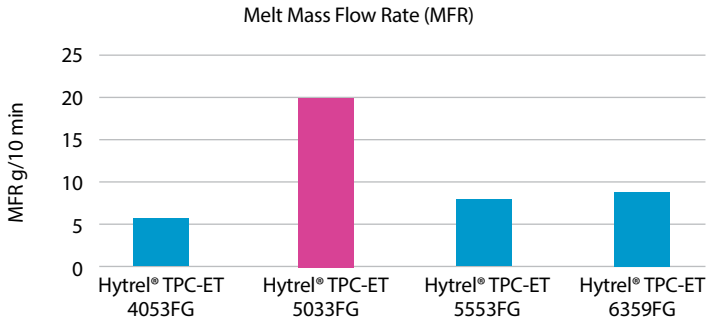
RECYCLING HYTREL® TPC-ET MEET SUSTAINABILITY GOALS

Celanese's 2030 sustainability goals include a commitment to align 100% of our innovation portfolio to advance the UN Sustainable Development Goals in meaningful ways. The exceptional melt stability and thermoplastic nature of Hytrel® TPC-ET allow the recycling of processing scrap. Hytrel® TPC-ET can be reground and blended with virgin polymer to help manufacturers achieve sustainability goals.

STIFFNESS COMPARISON OF HYTREL® TPC-ET FOOD GRADES



VISCOSITY COMPARISON OF HYTREL® TPC-ET FOOD GRADES



CELANESE HYTREL® TPC-ET GRADES	MELT FLOW RATE, CM^3/10MIN
Hytrel TPC-ET 4053FG	5 (190°C)[1]
Hytrel TPC-ET 5033FG	20 (220°C)[1]
Hytrel TPC-ET 5553FG	8 (220°C)[1]
Hytrel TPC-ET 6359FG	9 (230°C)[1]

[1] Nominal Value. Test conditions: 2.16 kg load, temperature shown in parenthesis.

Source: Celanese

IDEAL FOR MANY APPLICATIONS

Applications for Hytrel® TPC-ET 5033FG include, but are not limited to:

- Mascara brushes
- Lip gloss applicators
- Pump diaphragms
- Food packaging

HYTREL® TPC-ET 5033FG

High-flow properties and food contact approved

RHEOLOGICAL PROPERTIES		
Molding shrinkage, parallel	1.1%	ISO 294-4, 2577
Molding shrinkage, normal	1.2%	ISO 294-4, 2577
TYPICAL MECHANICAL PROPERTIES		
Tensile modulus	130 MPa	ISO 527-1/-2
Stress at 10% elongation	8 MPa	ISO 527-1/-2
Stress at break TPE	36 MPa	ISO 527-1/-2
Strain at break TPE	>300%	ISO 527-1/-2
Shore D hardness, 15s	43	ISO 7619-1

Source: Celanese

WHY CHOOSE HYTREL® TPC-ET

Celanese Hytrel® TPC-ET thermoplastic elastomer combines the flexibility of rubber with the strength and processability of thermoplastics. Manufacturers prefer parts made with Hytrel® TPC-ET for their resilience, heat and chemical resistance, as well as their strength and durability.

The advantages of Hytrel® TPC-ET include:

- Flexibility and resilience
- Strength and abrasion resistance
- Easy processing
- Broad service temperature
- Chemical resistance
- Ability for over-molding and innovative designs
- Allows rework and recycling

TRANSFORMING INDUSTRIES AND IMPROVING LIVES THROUGH MATERIALS SCIENCE.

The foundation of everything we do at Celanese centers around what our customers need. It's not just about the solutions we innovate, but also how we work with our customers. Through our worldwide network of innovation and technical centers, our leading researchers work in close collaboration with customers, from concept to commercialization, using a wide range of processing, prototyping technologies, and testing expertise.

For more information about food-safe Hytrel® TPC-ET solutions for cosmetics packaging, contact your Celanese representative.

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