

GEON® Polymax P3870

GEON Performance Solutions - Thermoplastic Elastomer

Thursday, February 29, 2024

General Information

Product Description:

Color: Natural

Features: Soft Touch Rubbery Feel, Good Abrasion Resistant, Good Flow Property and Elasticity.

Applications: Overmolding onto PP substrates for flexible parts, houseware, grips, and seal applications.

Typical Properties

Physical	English	SI Metric	Test Method
Hardness (Shore A, 10 sec)	70	70	ASTM D2240
Specific Gravity	0.97 g/cm ³	0.97 g/cm ³	ASTM D792
Mechanical	English	SI Metric	Test Method
Tensile Strength	1407 psi	9.70 MPa	ASTM D412
Tensile Elongation at Break	835 %	835 %	ASTM D412
Tensile Stress @100% Strain	426 psi	2.94 MPa	ASTM D412
Tensile Stress @300% Strain	573 psi	3.95 MPa	ASTM D412
Apparent Viscosity			
392°F (200°C), 11170 1/s	9.4 Pa.s	9.4 Pa.s	ASTM D3835
392°F (200°C), 1340.5 1/s	49.2 Pa.s	49.2 Pa.s	ASTM D3835

Processing Parameters

Injection Molding	English	SI Metric
Zone 1 Temperature (Feed)	320-350 °F	160-180 °C
Zone 2 Temperature (Middle)	350-383 °F	180-195 °C
Zone 3 Temperature (Front)	356-410 °F	180-210 °C
Zone 4 Temperature (Nozzle)	365-428 °F	185-220 °C
Mold Temperature	60 to 80 °F	16 to 27 °C
Back Pressure	50 to 150 psi	0.34 to 1.0 Mpa
Screw Speed	25 to 75 rpm	25 to 75 rpm
Suggested Maximum Regrind	20 %	20 %

Drying is not typically required. Drying Temperature is 175°F (80°C) for 2 hours if there is surface moisture.

Purge thoroughly before and after use of this product with a low melt flow polyethylene (PE) or polypropylene (PP).

Regrind-levels up to 20% can be used with Polymax TPE with minimum property loss.

(1) Data herein is typical and not to be construed as specifications.

(2) Unless otherwise specified, all data listed is for natural or black colored materials. Pigments can affect properties.

IMPORTANT: The information contained herein is believed to be accurate, but this information should not be construed as a product specification. It is offered for your consideration, investigation, testing, and verification. The information is based on laboratory work with small-scale equipment and does not necessarily indicate end-product performance. Due to variations in methods, conditions, and equipment used commercially to process this product, no warranties or guarantees are made as to the suitability of this product for any particular application. Full-scale testing and end product performance are the responsibility of the user. GEON Performance Solutions is not liable for and the user assumes all risk and liability of any use or handling of this product. GEON PERFORMANCE SOLUTIONS MAKES NO WARRANTIES, EXPRESS OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. Nothing contained herein is to be considered as permission, recommendation, nor as an inducement to practice any patented invention without permission of the patent owner.