



Dynalloy™ GP 7510-50N

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynalloy™ GP 7510-50N is an easy processing, general purpose TPE designed for a wide variety of applications, including those where FDA compliance is required.

- Overmold Adhesion to Polypropylene

General

Material Status	• Commercial: Active
Regional Availability	• North America
Features	<ul style="list-style-type: none"> • General Purpose • Good Colorability • Good Flow • Good Processability • Good Processing Stability • Recyclable Material
Uses	<ul style="list-style-type: none"> • Consumer Applications • Flexible Grips • General Purpose • Household Goods • Industrial Applications • Overmolding • Soft Touch Applications • Sporting Goods
Agency Ratings	• FDA 21 CFR 177.2600 ¹
RoHS Compliance	• RoHS Compliant
Appearance	• Natural Color
Forms	• Pellets
Processing Method	• Injection Molding

Technical Properties²

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.15	1.15	ASTM D792
Molding Shrinkage - Flow	0.020 to 0.026 in/in	2.0 to 2.6 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Strength ^{3, 4} (Break, 73°F (23°C))	496 psi	3.42 MPa	ASTM D412
Tensile Elongation ^{3, 4} (Break, 73°F (23°C))	380 %	380 %	ASTM D412
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	44	44	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec ⁻¹	7.30 Pa·s	7.30 Pa·s	

Additional Information

Dynalloy™ GP 7510-50N can be recycled as a filler or impact modifier for polyolefins, or can be recycled by grinding and reintroduction to the molding process. Similar to PP or PE recycling process, if separated appropriately, it can be recycled many times.

Municipality waste stream recycle code is "7" which is designated for "Other".

Please contact GLS Thermoplastic Elastomers for a copy of our Recyclability Compliance letter.

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 370 °F	160 to 188 °C
Middle Temperature	350 to 390 °F	177 to 199 °C
Front Temperature	380 to 420 °F	193 to 216 °C

Injection	Typical Value (English)	Typical Value (SI)
Nozzle Temperature	380 to 440 °F	193 to 227 °C
Mold Temperature	60 to 100 °F	16 to 38 °C
Back Pressure	25.0 to 120 psi	0.172 to 0.827 MPa
Screw Speed	25 to 100 rpm	25 to 100 rpm

Injection Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynalloy™ GP 7510-50N. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40 g/10 min). Typical loadings for color concentrates are 1% to 5% by weight. Liquid color can be used, but mineral oil based carriers may have a significant effect on the final hardness value. Concentrates based on PVC should not be used. A high color match consistency can be obtained by using precolored compounds available from GLS. The final determination of color concentrate suitability should be determined by customer trials.

Purge thoroughly before and after use of this product with a low flow (0.5 - 2.5 MFR) polyethylene (PE) or polypropylene (PP).

Regrind levels up to 20% can be used with Dynalloy™ GP 7510-50N with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should remain as low as possible. The final determination of regrind effectiveness should be determined by the customer.

Dynalloy™ GP 7510-50N has excellent melt stability. Maximum residence times may vary, depending on the size of the barrel. Generally, the barrel should be emptied if it is idle for periods of 8 - 10 minutes or longer.

Drying is not Required

Injection Speed: 1 to 3 in/sec
 1st Stage - Boost Pressure: 200 to 900 psi
 2nd Stage - Hold Pressure: 50% of Boost
 Hold Time (Thick Part): 3 to 10 sec
 Hold Time (Thin Part): 1 to 3 sec

Notes

¹ Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

² Typical values are not to be construed as specifications.

³ Die C

⁴ 2 hr



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