

Dynalloy™ GP 7810-90T

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynalloy™ GP 7810-90T is a general purpose TPE compound designed for various consumer markets, including like kitchenware, toys, personal and infant care related applications. And the compound is formulated based on hydrogenated styrenic block copolymers (SEBS).

General

Material Status	• Commercial: Active
Regional Availability	• Asia Pacific
Agency Ratings	• EU 10/2011 ¹ • FDA 21 CFR 177.1210 ¹ • FDA 21 CFR 177.2600 ²
RoHS Compliance	• RoHS Compliant
Appearance	• Translucent
Forms	• Pellets
Processing Method	• Injection Molding

Technical Properties³

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.900	0.900	ASTM D792
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress ^{4, 5} (300% Strain, 73°F (23°C))	987 psi	6.81 MPa	ASTM D412
Tensile Strength ^{4, 5} (Yield, 73°F (23°C))	1460 psi	10.0 MPa	ASTM D412
Tensile Elongation ^{4, 5} (Break, 73°F (23°C))	630 %	630 %	ASTM D412
Hardness	Typical Value (English)	Typical Value (SI)	Test Method
Durometer Hardness (Shore A, 10 sec)	90	90	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity 392°F (200°C), 11200 sec ⁻¹	9.70 Pa·s	9.70 Pa·s	ASTM D3835

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	320 to 360 °F	160 to 182 °C
Middle Temperature	340 to 380 °F	171 to 193 °C
Front Temperature	360 to 420 °F	182 to 216 °C
Nozzle Temperature	360 to 430 °F	182 to 221 °C
Processing (Melt) Temp	360 to 430 °F	182 to 221 °C
Mold Temperature	70 to 80 °F	21 to 27 °C

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Injection Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Dynalloy™ GP 7810. 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. Concentrates based on PVC should not be used. 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 7810 with minimal property losses, provided that the regrind is free of contamination.

To minimize losses during molding, the melt temperature should be as low as possible. The final determination of regrind effectiveness should be determined by the customer.

The Dynalloy™ GP 7810 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

Notes

¹ Contact GLS Thermoplastic Elastomers for a copy of the EU Compliance letter

² Contact GLS Thermoplastic Elastomers for a copy of the FDA Compliance letter

³ Typical values are not to be construed as specifications.

⁴ Die C

⁵ 2 hr

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