# 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 Properties [3]

| 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 | | | ASTM D3835 |
| 392°F (200°C), 11200 sec^-1 | 9.70 Pa·s | 9.70 Pa·s | |

### 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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