# Dynalloy™ OBC8000-T60

## Thermoplastic Elastomer

## Key Characteristics

| Product Description |
|---|

Dynalloy™ OBC8000-T60 is an easy processing, general processing TPE utilizing the unique rubber properties of Dow INFUSE™ Olefin Block Copolymers. Designed for a wide variety of applications, including applications requiring FDA compliances

- Adhesion to Polypropylene
- Enhanced Flow
- Excellent Colorability
- Warm, Non-tacky, Rubbery

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Features | • Good Colorability | • Good Flow | |
| Uses | • Consumer Applications<br>• Overmolding | • Soft Touch Applications<br>• Transparent or Translucent Parts | |
| Agency Ratings | • FDA Unspecified Rating | | |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Translucent | | |
| Forms | • Pellets | | |
| Processing Method | • Extrusion | • Injection Molding | |

## Technical Properties [1]

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|---|---|---|---|
| Specific Gravity | 0.880 | 0.880 | ASTM D792 |
| Molding Shrinkage - Flow (70°F (21°C)) | 0.010 to 0.016 in/in | 1.0 to 1.6 % | ASTM D955 |
| **Elastomers** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Tensile Stress [2, 3] (300% Strain, 73°F (23°C)) | 360 psi | 2.48 MPa | ASTM D412 |
| Tensile Strength [2, 3] (Break, 73°F (23°C)) | 610 psi | 4.21 MPa | ASTM D412 |
| Tensile Elongation [2, 3] (Break, 73°F (23°C)) | 760 % | 760 % | ASTM D412 |
| Compression Set (73°F (23°C), 22 hr) | 30 % | 30 % | ASTM D395B |
| **Hardness** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Durometer Hardness (Shore A, 10 sec) | 60 | 60 | ASTM D2240 |
| **Fill Analysis** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Apparent Viscosity | | | ASTM D3835 |
| 392°F (200°C), 1340 sec^-1 | 42.8 Pa·s | 42.8 Pa·s | |
| 392°F (200°C), 11200 sec^-1 | 9.80 Pa·s | 9.80 Pa·s | |

## Processing Information

| Injection | Typical Value (English) | Typical Value (SI) |
|---|---|---|
| Suggested Max Regrind | 20 % | 20 % |
| Rear Temperature | 330 to 370 °F | 166 to 188 °C |
| Middle Temperature | 350 to 390 °F | 177 to 199 °C |
| Front Temperature | 390 to 430 °F | 199 to 221 °C |

| Injection | Typical Value (English) | Typical Value (SI) |
|---|---|---|
| Nozzle Temperature | 390 to 430 °F | 199 to 221 °C |
| Processing (Melt) Temp | 380 to 440 °F | 193 to 227 °C |
| Mold Temperature | 80.0 to 100 °F | 26.7 to 37.8 °C |
| Back Pressure | 0.00 to 80.0 psi | 0.00 to 0.552 MPa |
| Screw Speed | 50 to 100 rpm | 50 to 100 rpm |

**Injection Notes**

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (LDPE) carriers are most suitable for coloring Dynalloy™ OBC8000-T60. 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) polystyrene (PS) or polypropylene (PP).

Regrind levels up to 20% can be used with Dynalloy™ OBC8000-T60 with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt tempetature should remain as low as possible. The final determination of regrind effectiveness should be determined by the customer.

Dynalloy™ OBC8000-T60 has good 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: 20% of Boost
Hold Time (Thick Part): 4 to 10 sec
Hold Time (Thin Part): 1 to 4 sec

### Notes

[1] Typical values are not to be construed as specifications.

[2] Die C

[3] 2 hr

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