# Dynalloy™ OBC 8100-N65

## Thermoplastic Elastomer

## Key Characteristics

**Product Description**

Dynalloy™ OBC8100-N65 is a TPE developed utilizing the unique rubber properties of Dow INFUSE™ Olefin Block Copolymers. The 8100 Series has been specifically developed for applications requiring the TPE to be in direct contact with food.

New Product. Commercial specifications have not been established.

- Adhesion to Polypropylene, Low Density Polyethylene
- Direct Food Contact
- Enhanced Flow Properties
- Excellent Colorability

| General | | | |
|---|---|---|---|
| Material Status | • Commercial: Active | | |
| Regional Availability | • Africa & Middle East<br>• Asia Pacific | • Europe<br>• Latin America | • North America |
| Features | • Food Contact Acceptable | • Good Colorability | • Good Flow |
| Uses | • Food Service Applications<br>• Household Goods | • Kitchenware<br>• Non-specific Food Applications | • Overmolding<br>• Soft Touch Applications |
| Agency Ratings | • BfR Food Contact [1] | • EU 2002/72/EC [2] | • FDA 21 CFR 177.2600 [3] |
| RoHS Compliance | • RoHS Compliant | | |
| Appearance | • Natural Color | | |
| Forms | • Pellets | | |
| Processing Method | • Injection Molding | | |

## Technical Properties [4]

| Physical | Typical Value (English) | Typical Value (SI) | Test Method |
|---|---|---|---|
| Density / Specific Gravity | 1.06 | 1.06 | ASTM D792 |
| **Elastomers** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Tensile Stress [5, 6] (100% Strain, 73°F (23°C)) | 435 psi | 3.00 MPa | ASTM D412 |
| Tensile Stress [5, 6] (300% Strain, 73°F (23°C)) | 530 psi | 3.65 MPa | ASTM D412 |
| Tensile Strength [5, 6] (Break, 73°F (23°C)) | 620 psi | 4.27 MPa | ASTM D412 |
| Tensile Elongation [5, 6] (Break, 73°F (23°C)) | 570 % | 570 % | ASTM D412 |
| Tear Strength | 135 lbf/in | 23.6 kN/m | ASTM D624 |
| Compression Set (73°F (23°C), 22 hr) | 21 % | 21 % | ASTM D395B |
| **Hardness** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Durometer Hardness (Shore A, 10 sec) | 63 | 63 | ASTM D2240 |
| **Fill Analysis** | **Typical Value (English)** | **Typical Value (SI)** | **Test Method** |
| Apparent Viscosity | | | ASTM D3835 |
| 392°F (200°C), 1340 sec^-1 | 117 Pa·s | 117 Pa·s | |
| 392°F (200°C), 11200 sec^-1 | 27.0 Pa·s | 27.0 Pa·s | |

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## Processing Information

| Injection | Typical Value (English) | Typical Value (SI) |
|---|---|---|
| Rear Temperature | 320 to 370 °F | 160 to 188 °C |
| Middle Temperature | 350 to 380 °F | 177 to 193 °C |
| Front Temperature | 360 to 410 °F | 182 to 210 °C |
| Nozzle Temperature | 380 to 420 °F | 193 to 216 °C |
| Mold Temperature | 60 to 80 °F | 16 to 27 °C |
| Back Pressure | 0.00 to 100 psi | 0.00 to 0.689 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™ OBC 8100-N65. 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).

Drying is not Required

Injection Speed: 1 to 3 in/sec
1st Stage - Boost Pressure: 175 to 800 psi
2nd Stage - Hold Pressure: 30% 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 BfR compliance letter.

[2] Please contact GLS Thermoplastic Elastomers for a copy of the EU compliance letter.

[3] Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.

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

[5] Die C

[6] 2 hr

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