



# Dynalloy™ OBC 8100-N75

## Thermoplastic Elastomer

### Key Characteristics

#### Product Description

Dynalloy™ OBC8100-N75 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 • Asia Pacific	• Europe • Latin America	• North America
Features	• Food Contact Acceptable	• Good Colorability	• Good Flow
Uses	• Household Goods • Kitchenware	• Non-specific Food Applications • Overmolding	• Soft Touch Applications
Agency Ratings	• BfR Food Contact, Unspecified Rating <sup>1</sup>	• EU 2002/72/EC <sup>2</sup>	• FDA 21 CFR 177.2600 <sup>3</sup>
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Injection Molding		

### Technical Properties <sup>4</sup>

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.02	1.02	ASTM D792
Molding Shrinkage - Flow	6.0E-3 to 0.013 in/in	0.60 to 1.3 %	ASTM D955
Molding Shrinkage - Across Flow	6.0E-3 to 0.013 in/in	0.60 to 1.3 %	ASTM D955
Elastomers	Typical Value (English)	Typical Value (SI)	Test Method
Tensile Stress <sup>5, 6</sup> (100% Strain, 73°F (23°C))	516 psi	3.56 MPa	ASTM D412
Tensile Stress <sup>5, 6</sup> (300% Strain, 73°F (23°C))	620 psi	4.27 MPa	ASTM D412
Tensile Strength <sup>5, 6</sup> (Break, 73°F (23°C))	816 psi	5.63 MPa	ASTM D412
Tensile Elongation <sup>5, 6</sup> (Break, 73°F (23°C))	690 %	690 %	ASTM D412
Tear Strength	208 lbf/in	36.4 kN/m	ASTM D624
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)	71	71	ASTM D2240
Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec <sup>-1</sup>	120 Pa·s	120 Pa·s	
392°F (200°C), 11200 sec <sup>-1</sup>	28.1 Pa·s	28.1 Pa·s	

## 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-N75. 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

- <sup>1</sup> Please contact GLS Thermoplastic Elastomers for a copy of the BfR compliance letter.
- <sup>2</sup> Please contact GLS Thermoplastic Elastomers for a copy of the EU compliance letter.
- <sup>3</sup> Please contact GLS Thermoplastic Elastomers for a copy of the FDA compliance letter.
- <sup>4</sup> Typical values are not to be construed as specifications.
- <sup>5</sup> Die C
- <sup>6</sup> 2 hr



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