Dynaflex™ G2745

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ G2745 is designed for injection molding, however, can also be process by extrusion and injection molding.

- Easy Processing
- Excellent Colorability
- Excellent Ozone Resistance and Heat Aging

General		
Material Status	• Commercial: Active	
Regional Availability	• Asia Pacific	
Features	• Good Colorability • Good Processability	• Heat Aging Resistant • Ozone Resistant
Uses	• Consumer Applications • Overmolding	• Personal Care • Soft Touch Applications
Agency Ratings	• BfR XXI, section 2.1.3.1.1 [1]	• FDA 21 CFR 177.1210 [2]
RoHS Compliance	• RoHS Compliant	
Appearance	• Clear/Transparent	
Forms	• Pellets	
Processing Method	• Extrusion	• Injection Molding

Technical Properties [3]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.890	0.890	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [4, 5] (300% Strain, 73°F (23°C))	400 psi	2.76 MPa	ASTM D412
Tensile Strength [4, 5] (Break, 73°F (23°C))	740 psi	5.10 MPa	ASTM D412
Tensile Elongation [4, 5] (Break, 73°F (23°C))	600 %	600 %	ASTM D412
Tear Strength [5] (73°F (23°C))	156 lbf/in	27.3 kN/m	ASTM D624
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	42	42	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	35.0 Pa·s	35.0 Pa·s	
392°F (200°C), 11200 sec^-1	9.90 Pa·s	9.90 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	385 to 400 °F	196 to 204 °C
Front Temperature	400 to 420 °F	204 to 216 °C
Nozzle Temperature	420 to 450 °F	216 to 232 °C
Mold Temperature	75 to 150 °F	24 to 66 °C
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa

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Injection Notes

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or polyethylene (PE) carrier are most suitable for coloring Dynaflex™ G2745. 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) polyethylene (PE) or polypropylene (PP).

Regrind levels up to 20% can be used with Dynaflex™ G2745 with minimal property loss, provided that the regrind is free of contamination. To minimize losses during molding, the melt temperature should remain as low as possible. The final determination of regrind effectiveness should be determined by the customer.

Dynaflex™ G2745 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

Injection Speed: 0.5 to 3 in/sec
1st Stage - Boost Pressure: 400 to 900 psi

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 FDA compliance letter.

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

[4] Die C

[5] 2 hr

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