Dynaflex™ D3204-1000-03

Thermoplastic Elastomer

Key Characteristics

Product Description

Dynaflex™ D3204-1000-03 is an easy processing TPE designed for general purpose applications and is suitable for injection molding, extrusion, blow molding, and thermoforming processes.

- Dry Feel
- Easy Processing
- Good Melt Strength
- Soft Touch

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Melt Strength	• Good Processability	
Uses	• Consumer Applications	• General Purpose	• Toys
Agency Ratings	• FDA Unspecified Rating		
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Forms	• Pellets		
Processing Method	• Extrusion	• Injection Molding	

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.01	1.01	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	6.0 g/10 min	6.0 g/10 min	
200°C/5.0 kg	23 g/10 min	23 g/10 min	
Molding Shrinkage - Flow	1.0E-3 to 4.0E-3 in/in	0.10 to 0.40 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	990 psi	6.83 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	1100 psi	7.60 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	420 %	420 %	ASTM D412
Tear Strength	260 lbf/in	45.5 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	22 %	22 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	78	78	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	23.5 Pa·s	23.5 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Rear Temperature	240 to 320 °F	116 to 160 °C
Middle Temperature	330 to 370 °F	166 to 188 °C
Front Temperature	360 to 400 °F	182 to 204 °C

Injection	Typical Value (English)	Typical Value (SI)
Nozzle Temperature	360 to 400 °F	182 to 204 °C
Mold Temperature	70 to 90 °F	21 to 32 °C
Back Pressure	0.00 to 150 psi	0.00 to 1.03 MPa
Screw Speed	40 to 100 rpm	40 to 100 rpm

Injection Notes

Color concentrates ethylene vinyl acetate (EVA) carriers are most suitable for coloring Dynaflex™ D3204-1000-03. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow rate of 25 - 40 g/10 min). Typical loadings for color concentrates are 1% to 5% by weight. A high color match consistency may be obtained by using precolored compounds available from GLS. 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) polystyrene (PS) or polypropylene (PP).

Dynaflex™ D3204-1000-03 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 5 - 8 minutes or longer.

Drying is not Required

Injection Speed: 1 to 5 in/sec
1st Stage - Boost Pressure: 300 to 700 psi
2nd Stage - Hold Pressure: 70% of Boost
Hold Time (Thick Part): 4 to 10 sec
Hold Time (Thin Part): 1 to 3 sec

Notes

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

[2] Die C

[3] 2 hr

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