Versaflex™ VDT 5120-40N

Thermoplastic Elastomer

Key Characteristics

Product Description			
Versaflex™ VDT 5120-40N is a vibration and impact damping TPE formulated to bond to a variety of standard and modified nylon materials, including those which are glass-filled, heat stabilized and/or impact modified			
General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Europe • Latin America	• North America
Features	• Good Adhesion	• Vibration Damping	
Uses	• Appliance Components • Automotive Applications • Consumer Applications	• Flexible Grips • General Purpose • Overmolding	• Power/Other Tools • Soft Touch Applications • Sporting Goods
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	1.09	1.09	ASTM D792
Molding Shrinkage - Flow	0.031 to 0.039 in/in	3.1 to 3.9 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	180 psi	1.24 MPa	ASTM D412
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))	590 psi	4.07 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	750 %	750 %	ASTM D412
Tear Strength [2] (73°F (23°C))	131 lbf/in	22.9 kN/m	ASTM D624
Compression Set (73°F (23°C))	20 %	20 %	ASTM D395B
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	134 Pa·s	134 Pa·s	
392°F (200°C), 11200 sec^-1	25.0 Pa·s	25.0 Pa·s	

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	360 to 400 °F	182 to 204 °C
Middle Temperature	470 to 510 °F	243 to 266 °C
Front Temperature	480 to 520 °F	249 to 271 °C
Nozzle Temperature	490 to 530 °F	254 to 277 °C
Mold Temperature	55 to 85 °F	13 to 29 °C
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa

Injection Notes

Color concentrates based on Versaflex™ VDT 5120-40N are most suitable for coloring Versaflex™ VDT 5120-40N. Typical loadings for color concentrates are 1% to 4% by weight. 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 polypopylene (PP).

Regrind levels up to 20% can be used with Versaflex™ VDT 5120-40N 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.

Versaflex™ VDT 5120-40N 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: 3 to 5 in/sec
1st Stage - Boost Pressure: 300 to 8000 psi
2nd Stage - Hold Pressure: 0% of Boost
Hold Time (Thick Part): 0 to 4 sec
Hold Time (Thin Part): 0 to 2 sec

Notes

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

[2] Die C

[3] 2 hr

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