Versaflex™ TC 5101-60B E3

Thermoplastic Elastomer

Key Characteristics

Product Description			
Versaflex™ TC 5101-60B E3 is a performance TPE alloy designed for the conductive application.			
General			
Material Status	• Commercial: Active		
Regional Availability	• Asia Pacific		
Features	• Electrically Conductive	• Good Moldability	• Good Processability
Uses	• Consumer Applications • Electrical/Electronic Applications	• Flexible Grips • Power/Other Tools	
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.05	1.05	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	664 psi	4.58 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	998 psi	6.88 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	570 %	570 %	ASTM D412
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	60	60	ASTM D2240
Electrical	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Surface Resistivity (73°F (23°C))	1.0E+2 to 9.9E+3 ohms	1.0E+2 to 9.9E+3 ohms	ASTM D257
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	11.2 Pa·s	11.2 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Suggested Max Regrind	20 %	20 %
Rear Temperature	325 to 370 °F	163 to 188 °C
Middle Temperature	360 to 390 °F	182 to 199 °C
Front Temperature	360 to 450 °F	182 to 232 °C
Nozzle Temperature	360 to 450 °F	182 to 232 °C
Mold Temperature	70 to 120 °F	21 to 49 °C
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa
Screw Speed	75 to 125 rpm	75 to 125 rpm

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Injection Notes

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 Versaflex™ TC 5101-60B E3 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.

The Versaflex™ TC 5101-60B E3 should not be left in the barrel for extended idle periods.

Suggested Dewpoint: -40°F

Injection Speed: 0.5 to 2 in/sec
1st Stage - Boost Pressure: 200 to 800 psi
2nd Stage - Hold Pressure: 30% 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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