Versaflex™ HC BIO BT218

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ HC BIO BT218 is a weldable bio-based TPE with great tensile strength performance developed for biopharmaceutical tubing applications in healthcare.

- Autoclavable sterilizable
- Weldable
- Kink Resistant

New product. Commercial specifications have not been established.

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Color Stability	• Good Flexibility	• Kink Resistant
Uses	• Medical/Healthcare Applications	• Tubing	
Agency Ratings	• ISO 10993-11 • ISO 10993-4	• ISO 10993-5 • USP Class VI	
RoHS Compliance	• RoHS Compliant		
Appearance	• Translucent		
Forms	• Pellets		
Processing Method	• Extrusion		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.880	0.880	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	416 psi	2.87 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	668 psi	4.61 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	1190 psi	8.20 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	630 %	630 %	ASTM D412
Compression Set			ASTM D395B
72°F (22°C), 22 hr	18 %	18 %	
212°F (100°C), 22 hr	58 %	58 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	70	70	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 1340 sec^-1	50.0 Pa·s	50.0 Pa·s	
392°F (200°C), 11200 sec^-1	11.0 Pa·s	11.0 Pa·s	

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Processing Information

Extrusion	Typical Value (English)	Typical Value (SI)
Melt Temperature	360 to 400 °F	182 to 204 °C
Die Temperature	360 to 420 °F	182 to 216 °C

Extrusion Notes

Rear: 330 to 370F
Center: 350 to 400F
Front: 360 to 420F
Screw speed: 100 to 500 RPM
Drying is not required

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or low density polyethylene (PE) carriers are most suitable for coloring Versaflex™ HC BIO BT218. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40g/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).

The use of regrind is not recommended for Versaflex™ HC BIO BT218.

Notes

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

[2] Die C

[3] 2 hr

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