Versaflex™ HC 2110-57B EU

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ HC 2110-57B EU is a TPE designed for use in the healthcare industry offering low stiction and good compression set.

New Product. Commercial specifications have not been established.

- Bonds to Polypropylene
- ETO, Gamma and Autoclave sterilization compatible

General			
Material Status	• Commercial: Active		
Regional Availability	• Europe		
Features	• Good Sterilizability	• Low Compression Set	• Low Friction
Uses	• Gaskets • Medical/Healthcare Applications	• Overmolding • Plugs	
Agency Ratings	• ISO 10993-4	• ISO 10993-5	• USP Class VI [1]
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [2]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.01	1.01	ISO 1183
Molding Shrinkage - Flow	9.0E-3 to 0.019 in/in	0.90 to 1.9 %	ISO 294-4
Molding Shrinkage - Across Flow	0.011 to 0.021 in/in	1.1 to 2.1 %	ISO 294-4
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress (100% Strain, 73°F (23°C))	319 psi	2.20 MPa	DIN 53504-S2
Tensile Stress (300% Strain, 73°F (23°C))	682 psi	4.70 MPa	DIN 53504-S2
Tensile Strength (Break, 73°F (23°C))	1020 psi	7.00 MPa	DIN 53504-S2
Tensile Elongation (Break, 73°F (23°C))	550 %	550 %	DIN 53504-S2
Tear Strength	166 lbf/in	29.0 kN/m	ISO 34
Compression Set			ISO 815
73°F (23°C), 72 hr	20 %	20 %	
158°F (70°C), 22 hr	35 %	35 %	
212°F (100°C), 22 hr	50 %	50 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Shore Hardness (Shore A, 10 sec)	56	56	ISO 48-4
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	9.00 Pa·s	9.00 Pa·s	

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Rear Temperature	338 to 356 °F	170 to 180 °C
Middle Temperature	374 to 410 °F	190 to 210 °C
Front Temperature	401 to 437 °F	205 to 225 °C
Nozzle Temperature	401 to 446 °F	205 to 230 °C
Mold Temperature	68 to 104 °F	20 to 40 °C
Screw Speed	80 to 120 rpm	80 to 120 rpm

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).

Versaflex™ HC 2110-57B EU 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 2.5 in/sec
Hold Time (Thick Part): 2 to 7 sec
Hold Time (Thin Part): 1 to 3 sec

Notes

[1] Please contact PolyOne GLS Thermoplastic Elastomers for a complete copy of the GLS Healthcare Policy.
1. The Customer must notify GLS of any FDA Class I and/or European Union Class I medical devices for each specific product and application.
2. The Customer shall not knowingly manufacture, use, sell or otherwise supply, directly or indirectly products or compounds made from GLS products in any of the following without prior written approval by GLS for each specific product or application:
a. Cosmetics
b. Drugs and other Pharmaceuticals
c. Temporary or permanent implantation in the human body, regardless of the intended duration of implantation
d. Class II and Class III Medical Devices as defined in 21 CFR 860.3 ("Medical Devices")
e. Class IIa, IIb and III as defined in Directive 93/42/EEC

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

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