Versaflex™ HC 2110-43N

Thermoplastic Elastomer

Key Characteristics

Product Description

Versaflex™ HC 2110-43N is a unique TPE designed for the demanding requirements of pharmaceutical packaging.

- Good Compression Set
- Good Reseal Characteristics

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Agency Ratings	• ISO 10993 Part 4	• ISO 10993 Part 5	• USP Class VI [1]
RoHS Compliance	• RoHS Compliant		
Appearance	• Natural Color		
Processing Method	• Injection Molding		

Technical Properties [2]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	0.980	0.980	ASTM D792
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [3, 4] (100% Strain, 73°F (23°C))	173 psi	1.19 MPa	ASTM D412
Tensile Stress [3, 4] (300% Strain, 73°F (23°C))	368 psi	2.54 MPa	ASTM D412
Tensile Strength [3, 4] (Break, 73°F (23°C))	723 psi	4.98 MPa	ASTM D412
Tensile Elongation [3, 4] (Break, 73°F (23°C))	680 %	680 %	ASTM D412
Compression Set			ASTM D395B
73°F (23°C), 22 hr	12 %	12 %	
158°F (70°C), 22 hr	22 %	22 %	
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	43	43	ASTM D2240
Fill Analysis	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	11.8 Pa·s	11.8 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Rear Temperature	340 to 380 °F	171 to 193 °C
Middle Temperature	380 to 470 °F	193 to 243 °C
Front Temperature	400 to 490 °F	204 to 254 °C
Nozzle Temperature	420 to 490 °F	216 to 254 °C
Mold Temperature	60 to 100 °F	16 to 38 °C
Back Pressure	0.00 to 120 psi	0.00 to 0.827 MPa
Screw Speed	25 to 100 rpm	25 to 100 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 2110-43N 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: 1 to 3 in/sec
1st Stage - Boost Pressure: 25 to 1000 psi
2nd Stage - Hold Pressure: 30% of Boost
Hold Time (Thick Part): 3 to 10 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.

[3] Die C

[4] 2 hr

CONTACT INFORMATION

North America
Avon Lake, United States
33587 Walker Road
Avon Lake, OH, United States , 44012
+1 440 930 1000
+1 844 4AVIENT

South America
Sao Paulo, Brazil
Av. Francisco Nakasato, 1700
13295-000 Itupeva
Sao Paulo, Brazil
+55 11 4593 9200

Asia
Shanghai, China
2F, Block C
200 Jinsu Road
Pudong, 201206
Shanghai, China
+86 (0) 21 6028 4888

Europe
Pommerloch, Luxembourg
19 Route de Bastogne
Pommerloch, Luxembourg , L-9638
+352 269 050 35

avient.com