Versaflex™ HC 2110-45N EU

Thermoplastic Elastomer

PolyOne Corporation

Message:

Versaflex HC 2110-45N EU is a thermoplastic elastomer developed as an alternative to traditional isoprene rubber solutions for infusion stoppers & septums that require multiple needle penetration with good resealing performance.
Versaflex HC 2110-45N EU addresses needs such as low piercing force and good spike retention.
Overmolds to PP and PE
Approved to ISO 10993 - 4 & 5
Approved to USP VI

General Information			
Features	Good disinfection		
	Good formability		
	Good processing stability		
	Good liquidity		
	Good coloring		
	Good demoulding performance		
Uses	overmolding		
	Plug		
	Seals		
	Sealing device		
	Membrane		
	Medical/nursing supplies		
Agency Ratings	ISO 10993 Part 4		
	ISO 10993 Part 5		
	USP Class VI		
RoHS Compliance	RoHS compliance		
Appearance	Natural color		
Forms	Particle		
Processing Method	Injection molding		
Physical	**Nominal Value**	**Unit**	**Test Method**
Specific Gravity	0.900	g/cm³	ISO 1183
Hardness	**Nominal Value**	**Unit**	**Test Method**
Durometer Hardness (Shore A, 3 sec)	45		ISO 868
Elastomers	**Nominal Value**	**Unit**	**Test Method**
Tensile Stress			ISO 37
100% strain	1.20	MPa	ISO 37
300% strain	2.20	MPa	ISO 37

Tensile Strength (Break, 23°C)	5.00	MPa	ISO 37
Tensile Elongation (Break, 23°C)	600	%	ISO 37
Compression Set			ISO 815
23°C, 72 hr	17	%	ISO 815
70°C, 22 hr	36	%	ISO 815
100°C, 22 hr	58	%	ISO 815
Fill Analysis	**Nominal Value**	**Unit**	**Test Method**
Apparent Viscosity (200°C, 11200 sec^-1)	11.0	Pa·s	ISO 11443
Injection	**Nominal Value**	**Unit**	
Suggested Max Regrind	20	%	
Rear Temperature	182 - 193	°C	
Middle Temperature	221 - 238	°C	
Front Temperature	238 - 249	°C	
Nozzle Temperature	238 - 249	°C	
Processing (Melt) Temp	232 - 249	°C	
Mold Temperature	15.6 - 32.2	°C	
Back Pressure	0.00 - 0.552	MPa	
Screw Speed	80 - 200	rpm	

Injection instructions

Color concentrates with polypropylene (PP), ethylene vinyl acetate (EVA), or polyethylene (PE) carriers are most suitable for coloring Versaflex HC 2110-45N EU. Improved color dispersion can be achieved by using higher melt flow concentrates (with a melt flow from 25 - 40 g/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).Regrind levels up to 20% can be used with Versaflex HC 2110-45N EU 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 HC 2110-45N 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 RequiredInjection Speed: 1 to 3 in/sec1st Stage - Boost Pressure: 800 to 1200 psi2nd Stage - Hold Pressure: 40-70% of BoostHold Time (Thick Part): 2 to 5 secHold Time (Thin Part): 1 to 4 sec

Recommended distributors for this material

Susheng Import & Export Trading Co.,Ltd.

Tel: +86 21 5895 8519

Phone: +86 13424755533

Email: sales@su-jiao.com

No. 215, Lianhe North Road, Fengxian District, Shanghai, China

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