

Versaflex™ HC MT555

Thermoplastic Elastomer

PolyOne Corporation

Message:

Versaflex™HC MT555 is an easy-to-process material designed for applications that require compliance with FDA standards and medical testing.
Excellent coloring
Soft to the touch

General Information	
Features	Workability, good Good processing stability Good coloring
Uses	Personal care Pipe fittings Transparent or Translucent Accessories Medical/nursing supplies
Agency Ratings	FDA 21 CFR 177.1210 2 ISO 10993 Part 4 ISO 10993 Part 5 USP Class VI
RoHS Compliance	RoHS compliance
Appearance	Translucent
Forms	Particle
Processing Method	Extrusion Injection molding

Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.888	g/cm ³	ASTM D792
Molding Shrinkage - Flow	1.6 - 2.2	%	ASTM D955
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 10 sec)	54		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress ¹			ASTM D412
100% strain, 23°C ²	1.74	MPa	ASTM D412
300% strain, 23°C ³	3.31	MPa	ASTM D412
Tensile Strength (Break, 23°C)	6.38	MPa	ASTM D412
Tensile Elongation (Break, 23°C)	630	%	ASTM D412
Compression Set (23°C, 22 hr)	20	%	ASTM D395B

Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity			ASTM D3835
200°C, 1340 sec ⁻¹	73.0	Pa·s	ASTM D3835
200°C, 11200 sec ⁻¹	13.1	Pa·s	ASTM D3835
Injection	Nominal Value	Unit	
Suggested Max Regrind	20	%	
Rear Temperature	166 - 182	°C	
Middle Temperature	182 - 204	°C	
Front Temperature	188 - 210	°C	
Nozzle Temperature	188 - 210	°C	
Processing (Melt) Temp	193 - 221	°C	
Mold Temperature	15.6 - 26.7	°C	
Back Pressure	0.00 - 0.552	MPa	
Screw Speed	80 - 120	rpm	

Injection instructions

以聚丙烯 (PP), 乙烯醋酸乙烯共聚物 (EVA) 或低密度聚乙烯 (LDPE) 为基础的色母料最适合 Versaflex™ HC MT555 着色. 使用熔体流动速率较高(范围为 25 - 40 克/10 分钟)的色母料, 则能达到较好的颜色分散效果. 典型的色母料用量为 1% 至 5%(重量). 可以使用液体颜料, 但以矿物油为基础的载体对最终硬度值会有显著的影响. 不应采用以 PVC 为基础的色母料. 若使用 GLS 可供的预着色复合材料, 则可达到较好的配色一致性. 色母料是否适用, 应由用户通过试验来最终确定. 在使用此产品之前或之后, 均须用熔体流动速率较低 (0.5 - 2.5 MFR) 的聚乙烯 (PE) 或聚丙烯 (PP) 彻底进行置换. Versaflex™ HC MT555 可利用高达 20% 的回收料同时其性能所受影响却极小, 但该回收料必须是未受到污染的. 为了最大限度地减小模塑期间其性能所受的影响, 熔体温度应维持得尽可能低. 回收料的有效性应由用户最终确定. Versaflex™ HC MT555 具有极好的熔体稳定性. 最长停留时间可能会根据机筒尺寸有所变化. 通常, 如果机器闲置 8 - 10 分钟或以上, 则应将机筒排空. 不需要干燥注射速度: 1 - 5 英寸/秒
 第一阶段 - 提升压力: 100 - 800 psi
 第二阶段 - 保持压力: 20% 的升压保持时间(厚部件): 4 - 10 秒
 保持时间(薄部件): 1 - 4 秒

Extrusion	Nominal Value	Unit
Melt Temperature	193 - 204	°C
Die Temperature	193 - 204	°C

Extrusion instructions

Rear: 340 - 360°F
 Center: 380 - 400°F
 Front: 390 - 410°F
 Screw: 80 - 200 RPMs

NOTE

1. 2 hours
2. Mouth die c
3. C mould

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