

Versalloy™ HC 9220-90

Thermoplastic Elastomer

PolyOne Corporation

Message:

Versalloy™HC 9220-90 is a TPV alloy with strong fluidity and surface aesthetic effects, suitable for a variety of applications.

Very strong coloring ability

It can be bonded to polypropylene by overlapping molding

Excellent surface aesthetics

General Information			
Features	Non-phthalate plasticizer		
	Recyclable materials		
	Workability, good		
	Good coloring		
	Excellent appearance		
Uses	overmolding		
	Pipe fittings		
	Soft touch application		
	Soft handle		
	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	Extrusion		
	Injection molding		
Physical	Nominal Value	Unit	Test Method
Specific Gravity	0.933	g/cm ³	ASTM D792
Molding Shrinkage			ISO 294-4
Vertical flow direction	1.9	%	ISO 294-4
Flow direction	2.1	%	ISO 294-4
Hardness	Nominal Value	Unit	Test Method
Durometer Hardness (Shore A, 10 sec)	90		ASTM D2240
Elastomers	Nominal Value	Unit	Test Method
Tensile Stress			ASTM D412

Transverse flow: 100% strain, 21°C ¹	7.10	MPa	ASTM D412
Flow: 100% strain, 21°C	9.16	MPa	ASTM D412
Flow: 300% strain, 21°C	10.5	MPa	ASTM D412
Transverse flow: 300% strain, 23°C	8.16	MPa	ASTM D412
Tensile Strength			ASTM D412
Flow: Fracture, 21°C	13.0	MPa	ASTM D412
Transverse flow: fracture, 23°C	13.9	MPa	ASTM D412
Tensile Elongation			ASTM D412
Transverse flow: fracture, 23°C	700	%	ASTM D412
Flow: Fracture, 21°C	540	%	ASTM D412
Tear Strength			ASTM D624
Transverse flow	67.4	kN/m	ASTM D624
Flow	72.4	kN/m	ASTM D624
Compression Set			ASTM D395B
23°C, 22 hr	25	%	ASTM D395B
23°C, 168 hr	25	%	ASTM D395B
70°C, 22 hr	41	%	ASTM D395B
70°C, 168 hr	59	%	ASTM D395B
100°C, 22 hr	55	%	ASTM D395B
100°C, 168 hr	69	%	ASTM D395B

Fill Analysis	Nominal Value	Unit	Test Method
Apparent Viscosity (200°C, 11200 sec ⁻¹)	28.6	Pa · s	ASTM D3835

Additional Information

Versalloy™ HC 9220-90 can be recycled as a filler or impact modifier for polyolefins, or can be recycled by grinding and reintroduction to the molding process. Similar to PP or PE recycling process, if separated appropriately, it can be recycled many times. Municipality waste stream recycle code is "7" which is designated for "Other". Please contact GLS Thermoplastic Elastomers for a copy of our Recyclability Compliance letter.

Injection	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	3.0	hr
Suggested Max Regrind	20	%
Rear Temperature	177 - 193	°C
Middle Temperature	182 - 218	°C
Front Temperature	193 - 218	°C
Nozzle Temperature	193 - 224	°C
Mold Temperature	15.6 - 26.7	°C
Back Pressure	0.00 - 0.689	MPa
Screw Speed	50 - 100	rpm

Injection instructions

以聚丙烯 (PP) 为基础的色母料最适合 Versalloy™ HC 9220-90 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).不应采用以 PVC 为基础的色母料.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.Versalloy™ HC 9220-90 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.Versalloy™ HC 9220-90 具有良好的熔体稳定性.如果机器闲置十五 (15) 分钟或以上,则应将机筒排空.注射速度:1 - 5 英寸/秒第一阶段 - 提升压力:300 - 700 psi第二阶段 - 保持压力:30% 的升压保持时间(厚部件):4 - 10 秒保持时间(薄部件):1 - 3 秒

Extrusion	Nominal Value	Unit
Drying Temperature	80.0	°C
Drying Time	3.0	hr
Cylinder Zone 1 Temp.	166 - 182	°C
Cylinder Zone 2 Temp.	177 - 204	°C
Cylinder Zone 3 Temp.	182 - 216	°C
Die Temperature	182 - 210	°C

NOTE

1. 2 hr

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