

PolyOne Versollan™ RU 2205-1 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

Versollan™ RU 2205-1 is the first of a new class of high performance, injection moldable TPU alloys developed to offer a rubbery feel and appearance, reduced cycle times, combined with the performance properties associated with TPUs. - Bonds to PC, ABS, PC/ABS, and Copolyester - Excellent Abrasion Resistance - Fast Set Up Rates During Processing - Matte Finish - Rubbery, Soft Touch Feel - Very Good Oil Resistance Color concentrates with EVA or LDPE carrier are most suitable for coloring Versollan™ RU 2205-1. Typical letdown ratios are 50:1 to 25:1 - loading levels should be as low as possible to minimize the effect on adhesion. A high color match consistency can be obtained by the use of precolored compounds available from GLS. Concentrates based on PVC should not be used. 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 Versollan™ RU 2205-1 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. Versollan™ RU 2205-1 should not be left in the barrel for extended idle periods (greater than 5 minutes). Suggested Dewpoint: -40°F Injection Speed: 0.5 to 2 in/sec 1st Stage - Boost Pressure: 300 to 700 psi 2nd Stage - Hold Pressure: 30% of Boost Hold Time (Thick Part): 4 to 10 sec Hold Time (Thin Part): 1 to 3 sec Information provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Versollan-RU-2205-1-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.16 g/cc	1.16 g/cc	ASTM D792
Viscosity	14100 cP	14100 cP	ASTM D3835
	@Shear Rate 11200 1/s, Temperature 200 °C	@Shear Rate 11200 1/s, Temperature 392 °F	
Maximum Moisture Content	0.020 - 0.030	0.020 - 0.030	
Linear Mold Shrinkage, Flow	0.010 - 0.015 cm/cm	0.010 - 0.015 in/in	ASTM D955
Melt Flow	7.0 g/10 min	7.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	67 g/10 min	67 g/10 min	ASTM D1238
	@Load 5.00 kg, Temperature 200 °C	@Load 11.0 lb, Temperature 392 °F	

Mechanical Properties	Metric	English	Comments
Hardness, Shore A	65	65	10 sec; ASTM D2240
	13.8 MPa	2000 psi	

Tensile Strength at Break Mechanical Properties	Metric @ Temperature 23.0 °C	English @ Temperature 73.4 °F	Die C2 hr; ASTM D412 Comments
Tensile Stress	2.62 MPa @Strain 100 %, Temperature 23.0 °C	380 psi @Strain 100 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
	4.21 MPa @Strain 300 %, Temperature 23.0 °C	611 psi @Strain 300 %, Temperature 73.4 °F	Die C2 hr; ASTM D412
Elongation at Break	710 % @Temperature 23.0 °C	710 % @Temperature 73.4 °F	Die C2 hr; ASTM D412
Tear Strength	47.3 kN/m	270 pli	ASTM D624
Compression Set	34 % @Temperature 23.0 °C, Time 79200 sec	34 % @Temperature 73.4 °F, Time 22.0 hour	ASTM D395B

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-67.0 °C	-88.6 °F	Thickness = 1.91mm Conditioned for 40hrs at 23C at 50% RH; ASTM D746
Flammability, UL94	HB @Thickness 1.50 mm	HB @Thickness 0.0591 in	1.5mm for US and China; 3.0mm for Canada.; UL 94

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	168 - 188 °C	334 - 370 °F	
Middle Barrel Temperature	179 - 199 °C	354 - 390 °F	
Front Barrel Temperature	191 - 210 °C	376 - 410 °F	
Nozzle Temperature	191 - 216 °C	376 - 421 °F	
Melt Temperature	188 - 210 °C	370 - 410 °F	
Mold Temperature	21.1 - 32.2 °C	70.0 - 90.0 °F	
Drying Temperature	51.7 - 54.4 °C	125 - 130 °F	
Dry Time	3.00 - 4.00 hour	3.00 - 4.00 hour	
Back Pressure	0.000 - 0.862 MPa	0.000 - 125 psi	
Screw Speed	75 - 125 rpm	75 - 125 rpm	

Descriptive Properties	Value	Comments
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Descriptive Properties	Value	Comments
Appearance	Natural Color	
Features	Good Abrasion Resistance	
	Oil Resistant	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Extrusion	
	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Consumer Applications	
	Furniture	
	Overmolding	
	Power/Other Tools	
	Soft Touch Applications	

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