

PolyOne Versollan™ OM 1255NX-1 Thermoplastic Elastomer (TPE)

Category : Polymer , Thermoplastic , Elastomer, TPE

Material Notes:

Versollan™ OM 1255NX-1 is a high performance TPU alloy designed for thin-wall overmolding onto polycarbonate (PC), ABS, PC/ABS and copolyester substrates. - Improved Grip with Matte, Rubbery Finish - Superior Adhesion to PC, ABS, PC/ABS, PC/PBT and CopolyesterColor concentrates with ethyl vinyl acetate (EVA) or polyether-based urethane carriers are most suitable for coloring Versollan™ OM 1255NX-1. Typical letdown ratios are 50:1 to 25:1 - loading levels should be as low as possible to minimize the effect on hardness. A high color match consistency can be obtained by the use of precolored compounds available from GLS. Polypropylene (PP) based color concentrates are not recommended because they significantly affect adhesion of the TPE to the substrate. Concentrates based on TPE 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™ OM 1255NX-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™ OM 1255NX-1 should not be left in the barrel for extended idle periods (greater than 5 minutes). Suggested Dewpoint: -40°F Injection Speed: 1 to 5 in/sec 1st Stage - Boost Pressure: 200 to 800 psi 2nd Stage - Hold Pressure: 70% of Boost Hold Time (Thick Part): 4 to 10 sec Hold Time (Thin Part): 1 to 3 secInformation provided by PolyOne

Order this product through the following link:

http://www.lookpolymers.com/polymer_PolyOne-Versollan-OM-1255NX-1-Thermoplastic-Elastomer-TPE.php

Physical Properties	Metric	English	Comments
Specific Gravity	1.05 g/cc	1.05 g/cc	ASTM D792
Viscosity	16700 cP	16700 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	0.0070 - 0.013 cm/cm	0.0070 - 0.013 in/in	ASTM D955
Melt Flow	8.0 g/10 min	8.0 g/10 min	ASTM D1238
	@Load 2.16 kg, Temperature 190 °C	@Load 4.76 lb, Temperature 374 °F	
	130 g/10 min	130 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	59	59	10 sec; ASTM D2240
	6.58 MPa	954 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	1.93 MPa	280 psi	Die C2 hr; ASTM D412
	@Strain 100 %, Temperature 23.0 °C	@Strain 100 %, Temperature 73.4 °F	
	3.39 MPa	492 psi	Die C2 hr; ASTM D412
	@Strain 300 %, Temperature 23.0 °C	@Strain 300 %, Temperature 73.4 °F	
Elongation at Break	650 %	650 %	Die C2 hr; ASTM D412
	@Temperature 23.0 °C	@Temperature 73.4 °F	
Tear Strength	38.5 kN/m	220 pli	ASTM D624
Compression Set	26 %	26 %	ASTM D395B
	@Temperature 23.0 °C, Time 79200 sec	@Temperature 73.4 °F, Time 22.0 hour	

Thermal Properties	Metric	English	Comments
Brittleness Temperature	-68.5 °C	-91.3 °F	Thickness = 1.90mm Conditioned for 40hrs at 23C at 50% RH; ASTM D746
Flammability, UL94	HB	HB	UL 94
	@Thickness 1.50 mm	@Thickness 0.0591 in	

Processing Properties	Metric	English	Comments
Rear Barrel Temperature	163 - 185 °C	325 - 365 °F	
Middle Barrel Temperature	168 - 196 °C	334 - 385 °F	
Front Barrel Temperature	177 - 210 °C	351 - 410 °F	
Nozzle Temperature	177 - 210 °C	351 - 410 °F	
Mold Temperature	21.1 - 48.9 °C	70.0 - 120 °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	0.172 - 0.345 MPa	24.9 - 50.0 psi	
Screw Speed	75 - 125 rpm	75 - 125 rpm	

Descriptive Properties	Value	Comments
Agency Ratings	UL 94 .QMFZ2.E76261	

Descriptive Properties	Value	Comments
Features	Good Colorability	
	Good Moldability	
	Good Processability	
	Low Gloss	
Forms	Pellets	
Generic Material	TPE	
Generic Name	Thermoplastic Elastomer (TPE)	
Manufacturer / Supplier	GLS Thermoplastic Elastomers	
Processing Method	Injection Molding	
Regional Availability	Africa & Middle East	
	Asia Pacific	
	Europe	
	North America	
	South America	
RoHS Compliance	RoHS Compliant	
Suggested Max Regrind	20%	
Uses	Business Equipment	
	Consumer Applications	
	Electrical/Electronic Applications	
	Flexible Grips	
	Overmolding	
	Power/Other Tools	
	Thin-walled Parts	

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