Versollan™ OM 1255NX-9

Thermoplastic Elastomer

Key Characteristics

Product Description

Versollan™ OM 1255NX-9 is a performance TPU alloy designed for thin wall overmolding onto polycarbonate (PC), ABS and PC/ABS substrates.

- Improved Grip with Matte, Rubbery Finish
- Superior Adhesion to PC, ABS, PC/ABS, PC/PBT and Copolyester

General			
Material Status	• Commercial: Active		
Regional Availability	• Africa & Middle East • Asia Pacific	• Latin America • North America	
Features	• Good Moldability	• Good Processability	• Low Gloss
Uses	• Business Equipment • Consumer Applications • Electrical/Electronic Applications	• Flexible Grips • Overmolding • Power/Other Tools	• Thin-walled Parts
Agency Ratings	• UL 94		
RoHS Compliance	• RoHS Compliant		
Appearance	• Black		
Forms	• Pellets		
Processing Method	• Injection Molding		

Technical Properties [1]

Physical	Typical Value (English)	Typical Value (SI)	Test Method
Density / Specific Gravity	1.05	1.05	ASTM D792
Melt Mass-Flow Rate (MFR)			ASTM D1238
190°C/2.16 kg	6.0 g/10 min	6.0 g/10 min	
200°C/5.0 kg	60 g/10 min	60 g/10 min	
Molding Shrinkage - Flow	0.011 to 0.017 in/in	1.1 to 1.7 %	ASTM D955
Elastomers	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Tensile Stress [2, 3] (100% Strain, 73°F (23°C))	280 psi	1.93 MPa	ASTM D412
Tensile Stress [2, 3] (300% Strain, 73°F (23°C))	492 psi	3.39 MPa	ASTM D412
Tensile Strength [2, 3] (Break, 73°F (23°C))	955 psi	6.58 MPa	ASTM D412
Tensile Elongation [2, 3] (Break, 73°F (23°C))	650 %	650 %	ASTM D412
Tear Strength	220 lbf/in	38.5 kN/m	ASTM D624
Compression Set (73°F (23°C), 22 hr)	24 %	24 %	ASTM D395B
Hardness	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Durometer Hardness (Shore A, 10 sec)	59	59	ASTM D2240
Thermal	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Brittleness Temperature [4]	-91.3 °F	-68.5 °C	ASTM D746
Flammability	**Typical Value (English)**	**Typical Value (SI)**	**Test Method**
Flame Rating (0.06 in (1.5 mm))	HB	HB	UL 94

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Fill Analysis	Typical Value (English)	Typical Value (SI)	Test Method
Apparent Viscosity			ASTM D3835
392°F (200°C), 11200 sec^-1	16.7 Pa·s	16.7 Pa·s	

Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	125 to 130 °F	52 to 54 °C
Drying Time	3.0 to 4.0 hr	3.0 to 4.0 hr
Suggested Max Moisture	< 0.030 %	< 0.030 %
Suggested Max Regrind	20 %	20 %
Rear Temperature	325 to 370 °F	163 to 188 °C
Middle Temperature	360 to 390 °F	182 to 199 °C
Front Temperature	370 to 410 °F	188 to 210 °C
Nozzle Temperature	380 to 420 °F	193 to 216 °C
Mold Temperature	70 to 120 °F	21 to 49 °C
Back Pressure	0.00 to 80.0 psi	0.00 to 0.552 MPa
Screw Speed	75 to 125 rpm	75 to 125 rpm

Injection Notes

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-9 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.

The Versollan™ OM 1255NX-9 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: 200 to 800 psi
2nd Stage - Hold Pressure: 30% of Boost
Hold Time (Thick Part): 4 to 10 sec
Hold Time (Thin Part): 1 to 3 sec

Notes

[1] Typical values are not to be construed as specifications.

[2] Die C

[3] 2 hr

[4] Thickness = 1.90mm
Conditioned for 40hrs at 23C at 50% RH

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