



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
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
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	

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Processing Information

Injection	Typical Value (English)	Typical Value (SI)
Drying Temperature	125 to 130 °F	51.7 to 54.4 °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	70.0 to 120 °F	21.1 to 48.9 °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

CONTACT INFORMATION**Americas**

United States - Avon Lake
+1 440 930 1000

United States - McHenry
+1 815 385 8500

Asia

China - Guangzhou
+86 20 8732 7260

China - Shenzhen
+86 755 2969 2888

China - Suzhou
+86 512 6823 24 38

China - Suzhou
+86 512 6265 2600

Hong Kong -
+852 2690 5332

Taiwan - Yonghe City,
+886 9396 99740, +886 2929 1849

Europe

Germany - Gaggenau
+49 7225 6802 0

Spain - Barbastro (Huesca)
+34 974 310 314



Beyond Polymers.

Better Business Solutions. SM

www.polyone.com

PolyOne Americas

33587 Walker Road
Avon Lake, Ohio 44012
United States
+1 440 930 1000
+1 866 POLYONE

PolyOne Asia

No. 88 Guoshoujing Road
Z.J Hi-tech Park, Pudong
Shanghai, 201203, China
+86 21 5080 1188

PolyOne Europe

6 Giällewee
+352 269 050 35

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