

# Versollan™ OM 1262NX-1

## Thermoplastic Elastomer

### Key Characteristics

#### Product Description

Versollan™ OM 1262NX-1 is a performance TPU alloy designed for thin-wall overmolding onto polycarbonate (PC), ABS and PC/ABS substrates.

- Excellent Grip with Matte, Rubbery Finish
- Proven Track Record
- Superior Adhesion to PC, ABS, PC/ABS, PC/PBT and Copolyester

#### General

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

### Technical Properties <sup>1</sup>

| Physical  | Typical Value (English) | Typical Value (SI) | Test Method |
|---|-------------------------|--------------------|-------------|
| Density / Specific Gravity                                  | 1.17                    | 1.17               | ASTM D792   |
| Melt Mass-Flow Rate (MFR)                                   |                         |                    | ASTM D1238  |
| 190°C/2.16 kg   | 11 g/10 min             | 11 g/10 min        |             |
| 200°C/5.0 kg  | 64 g/10 min             | 64 g/10 min        |             |
| Molding Shrinkage - Flow                                    | 9.0E-3 to 0.015 in/in   | 0.90 to 1.5 %      | ASTM D955   |
| Elastomers  | Typical Value (English) | Typical Value (SI) | Test Method |
| Tensile Stress <sup>2,3</sup><br>(100% Strain, 73°F (23°C)) | 370 psi                 | 2.55 MPa           | ASTM D412   |
| Tensile Stress <sup>2,3</sup><br>(300% Strain, 73°F (23°C)) | 485 psi                 | 3.34 MPa           | ASTM D412   |
| Tensile Strength <sup>2,3</sup> (Break, 73°F (23°C))        | 1110 psi                | 7.64 MPa           | ASTM D412   |
| Tensile Elongation <sup>2,3</sup> (Break, 73°F (23°C))      | 710 %                   | 710 %              | ASTM D412   |
| Tear Strength   | 230 lbf/in              | 40.3 kN/m          | ASTM D624   |
| Compression Set (73°F (23°C), 22 hr)                        | 35 %                    | 35 %               | ASTM D395B  |
| Hardness  | Typical Value (English) | Typical Value (SI) | Test Method |
| Durometer Hardness (Shore A, 10 sec)                        | 65                      | 65                 | ASTM D2240  |
| 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<br>392°F (200°C), 11200 sec <sup>-1</sup> | 20.0 Pa·s               | 20.0 Pa·s          | ASTM D3835  |

### Processing Information

| Injection              | Typical Value (English) | Typical Value (SI) |
|------------------------|-------------------------|--------------------|
| Drying Temperature     | 120 to 130 °F           | 49 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 100 °F            | 21 to 38 °C        |
| Back Pressure          | 0.00 to 80.0 psi        | 0.00 to 0.552 MPa  |
| Screw Speed            | 25 to 75 rpm            | 25 to 75 rpm       |

#### Injection Notes

Color concentrates with polyether or polyester-based urethane carriers are most suitable for coloring Versollan™ OM 1262NX-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.

Regrind levels up to 20% can be used with Versollan™ OM 1262NX-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 1262NX-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: 200 to 900 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

<sup>1</sup> Typical values are not to be construed as specifications.

<sup>2</sup> Die C

<sup>3</sup> 2 hr

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