

# LNP™ VERTON™ UX03320 compound

Polyphthalamide  
SABIC Innovative Plastics

Message:

VERTON\* UX03320 is a compound based on Polyphthalamide resin containing Long Glass.  
Also known as: LNP\* VERTON\* Compound PDX-U-03320  
Product Reorder name: UX03320

| General Information               |                   |                   |                      |
|-----------------------------------|-------------------|-------------------|----------------------|
| UL YellowCard                     | E45329-101284433  |                   |                      |
| Filler / Reinforcement            | Long glass fiber  |                   |                      |
| RoHS Compliance                   | RoHS compliance   |                   |                      |
| Processing Method                 | Injection molding |                   |                      |
| Physical                          | Nominal Value     | Unit              | Test Method          |
| Specific Gravity                  | 1.63              | g/cm <sup>3</sup> | ASTM D792, ISO 1183  |
| Molding Shrinkage                 |                   |                   |                      |
| Flow: 24 hours                    | 0.050 - 0.10      | %                 | ASTM D955            |
| Transverse flow: 24 hours         | 0.080 - 0.20      | %                 | ASTM D955            |
| Vertical flow direction: 24 hours | 0.15              | %                 | ISO 294-4            |
| Flow direction: 24 hours          | 0.060             | %                 | ISO 294-4            |
| Water Absorption                  |                   |                   |                      |
| 24 hr, 50% RH                     | 0.20              | %                 | ASTM D570            |
| Equilibrium, 23°C, 50% RH         | 0.30              | %                 | ISO 62               |
| Spiral flow length                |                   |                   | Internal method      |
| 1.00 mm                           | 30.0              |                   | Internal method      |
| 3.00 mm                           | 70.0              |                   | Internal method      |
| Mechanical                        | Nominal Value     | Unit              | Test Method          |
| Tensile Modulus                   |                   |                   |                      |
| -- <sup>1</sup>                   | 18200             | MPa               | ASTM D638            |
| --                                | 20300             | MPa               | ISO 527-2/1          |
| Tensile Strength                  |                   |                   |                      |
| Fracture                          | 220               | MPa               | ASTM D638            |
| Fracture                          | 200               | MPa               | ISO 527-2            |
| Tensile Elongation (Break)        | 1.9               | %                 | ASTM D638, ISO 527-2 |
| Flexural Modulus                  |                   |                   |                      |
| --                                | 18000             | MPa               | ASTM D790            |
| -- <sup>2</sup>                   | 17700             | MPa               | ISO 178              |
| Flexural Strength                 |                   |                   |                      |
| --                                | 300               | MPa               | ASTM D790            |
| --                                | 360               | MPa               | ISO 178              |
| Impact                            | Nominal Value     | Unit              | Test Method          |

|                                               |               |                   |                        |
|-----------------------------------------------|---------------|-------------------|------------------------|
| Notched Izod Impact                           |               |                   |                        |
| 23°C                                          | 300           | J/m               | ASTM D256              |
| 23°C <sup>3</sup>                             | 38            | kJ/m <sup>2</sup> | ISO 180/1A             |
| Unnotched Izod Impact                         |               |                   |                        |
| 23°C                                          | 800           | J/m               | ASTM D4812             |
| 23°C <sup>4</sup>                             | 70            | kJ/m <sup>2</sup> | ISO 180/1U             |
| Instrumented Dart Impact                      |               |                   |                        |
| 23°C, Total Energy                            | 15.0          | J                 | ASTM D3763             |
| --                                            | 19.0          | J                 | ISO 6603-2             |
| Thermal                                       | Nominal Value | Unit              | Test Method            |
| Deflection Temperature Under Load             |               |                   |                        |
| 1.8 MPa, unannealed, 3.20mm                   | 260           | °C                | ASTM D648              |
| 1.8 MPa, unannealed, 64.0mm span <sup>5</sup> | 275           | °C                | ISO 75-2/Af            |
| Linear thermal expansion coefficient          |               |                   | ASTM E831, ISO 11359-2 |
| Flow: -40 to 40°C                             | 1.2E-5        | cm/cm/°C          | ASTM E831, ISO 11359-2 |
| Lateral: -40 to 40°C                          | 2.2E-5        | cm/cm/°C          | ASTM E831, ISO 11359-2 |
| Flammability                                  | Nominal Value |                   | Test Method            |
| Flame Rating (0.800 mm)                       | HB            |                   | UL 94                  |
| Injection                                     | Nominal Value | Unit              |                        |
| Drying Temperature                            | 121 - 149     | °C                |                        |
| Drying Time                                   | 4.0           | hr                |                        |
| Suggested Max Moisture                        | 0.15          | %                 |                        |
| Rear Temperature                              | 316 - 327     | °C                |                        |
| Middle Temperature                            | 321 - 332     | °C                |                        |
| Front Temperature                             | 332 - 343     | °C                |                        |
| Processing (Melt) Temp                        | 316 - 332     | °C                |                        |
| Mold Temperature                              | 138 - 166     | °C                |                        |
| Back Pressure                                 | 0.172 - 0.344 | MPa               |                        |
| Screw Speed                                   | 30 - 60       | rpm               |                        |
| NOTE                                          |               |                   |                        |
| 1.                                            | 5.0 mm/min    |                   |                        |
| 2.                                            | 2.0 mm/min    |                   |                        |
| 3.                                            | 80*10*4       |                   |                        |
| 4.                                            | 80*10*4       |                   |                        |
| 5.                                            | 80*10*4 mm    |                   |                        |

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