

## DuPont Performance Polymers Minlon® 12T NC010 Nylon 66 (Unverified Data\*\*)

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 40% Mineral Filled

### Material Notes:

36% Mineral Reinforced Toughened Polyamide 66 Minlon 12T NC010 is a 36% mineral reinforced toughened heat stabilized polyamide 66 resin for injection molding. Information provided by DuPont Performance Polymers

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_DuPont-Performance-Polymers-Minlon-12T-NC010-Nylon-66-nbspUnverified-Data.php](http://www.lookpolymers.com/polymer_DuPont-Performance-Polymers-Minlon-12T-NC010-Nylon-66-nbspUnverified-Data.php)

| Physical Properties               | Metric             | English                   | Comments                      |
|-----------------------------------|--------------------|---------------------------|-------------------------------|
| Density                           | 1.41 g/cc          | 0.0509 lb/in <sup>3</sup> | DAM; ISO 1183                 |
| Water Absorption                  | 6.2 %              | 6.2 %                     | DAM; Sim. to ISO 62           |
|                                   | @Thickness 2.00 mm | @Thickness 0.0787 in      |                               |
| Moisture Absorption               | 1.70 %             | 1.70 %                    | DAM; Sim. to ISO 62           |
|                                   | @Thickness 2.00 mm | @Thickness 0.0787 in      |                               |
| Water Absorption at Saturation    | 1.2 %              | 1.2 %                     | DAM; Immersion 24h; ASTM D570 |
| Linear Mold Shrinkage, Flow       | 0.0090 cm/cm       | 0.0090 in/in              | DAM; ISO 294-4 2577           |
| Linear Mold Shrinkage, Transverse | 0.0090 cm/cm       | 0.0090 in/in              | DAM; ISO 294-4 2577           |

| Mechanical Properties     | Metric                               | English                              | Comments              |
|---------------------------|--------------------------------------|--------------------------------------|-----------------------|
| Tensile Strength at Break | 58.0 MPa                             | 8410 psi                             | 50%RH; ISO 527-1/-2   |
|                           | 80.0 MPa                             | 11600 psi                            | DAM; ISO 527-1/-2     |
| Tensile Stress            | 2.20 MPa                             | 319 psi                              | 50%RH; ISO 11403-1 -2 |
|                           | @Strain 0.100 %, Temperature 23.0 °C | @Strain 0.100 %, Temperature 73.4 °F |                       |
|                           | 3.34 MPa                             | 484 psi                              | DAM; ISO 11403-1 -2   |
|                           | @Strain 0.400 %, Temperature 150 °C  | @Strain 0.400 %, Temperature 302 °F  |                       |
|                           | 6.31 MPa                             | 915 psi                              | 50%RH; ISO 11403-1 -2 |
|                           | @Strain 1.10 %, Temperature 150 °C   | @Strain 1.10 %, Temperature 302 °F   |                       |
|                           | 10.28 MPa                            | 1491 psi                             | DAM; ISO 11403-1 -2   |
|                           | @Strain 1.70 %, Temperature 150 °C   | @Strain 1.70 %, Temperature 302 °F   |                       |

| Mechanical Properties | 10.73 MPa<br>Metric                      | 1556 psi<br>English                      | Comments<br>DAM; ISO 11403-1 -2 |
|-----------------------|--|--|---------------------------------|
|                       | @Strain 0.200 %,<br>Temperature 0.000 °C | @Strain 0.200 %,<br>Temperature 32.0 °F  |                                 |
|                       | <b>11.06 MPa</b>                         | <b>1604 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 2.30 %,<br>Temperature 150 °C    | @Strain 2.30 %,<br>Temperature 302 °F    |                                 |
|                       | <b>12.9 MPa</b>                          | <b>1870 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 0.700 %,<br>Temperature 23.0 °C  | @Strain 0.700 %,<br>Temperature 73.4 °F  |                                 |
|                       | <b>15.3 MPa</b>                          | <b>2220 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 0.300 %,<br>Temperature 0.000 °C | @Strain 0.300 %,<br>Temperature 32.0 °F  |                                 |
|                       | <b>15.36 MPa</b>                         | <b>2228 psi</b>                          | DAM; ISO 11403-1 -2             |
|                       | @Strain 3.20 %,<br>Temperature 150 °C    | @Strain 3.20 %,<br>Temperature 302 °F    |                                 |
|                       | <b>15.52 MPa</b>                         | <b>2251 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 4.00 %,<br>Temperature 150 °C    | @Strain 4.00 %,<br>Temperature 302 °F    |                                 |
|                       | <b>18.53 MPa</b>                         | <b>2688 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 6.00 %,<br>Temperature 150 °C    | @Strain 6.00 %,<br>Temperature 302 °F    |                                 |
|                       | <b>18.83 MPa</b>                         | <b>2731 psi</b>                          | DAM; ISO 11403-1 -2             |
|                       | @Strain 4.90 %,<br>Temperature 150 °C    | @Strain 4.90 %,<br>Temperature 302 °F    |                                 |
|                       | <b>20.3 MPa</b>                          | <b>2940 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 0.300 %,<br>Temperature -40.0 °C | @Strain 0.300 %,<br>Temperature -40.0 °F |                                 |
|                       | <b>21.0 MPa</b>                          | <b>3050 psi</b>                          | DAM; ISO 11403-1 -2             |
|                       | @Strain 0.400 %,<br>Temperature 23.0 °C  | @Strain 0.400 %,<br>Temperature 73.4 °F  |                                 |
|                       | <b>22.3 MPa</b>                          | <b>3230 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 1.60 %,<br>Temperature 23.0 °C   | @Strain 1.60 %,<br>Temperature 73.4 °F   |                                 |
|                       | <b>26.77 MPa</b>                         | <b>3883 psi</b>                          | 50%RH; ISO 11403-1 -2           |
|                       | @Strain 40.0 %,<br>Temperature 150 °C    | @Strain 40.0 %,<br>Temperature 302 °F    |                                 |
|                       | <b>29.55 MPa</b>                         | <b>4286 psi</b>                          | DAM; ISO 11403-1 -2             |
|                       | @Strain 0.500 %,                         | @Strain 0.500 %,                         |                                 |

| Mechanical Properties | Temperature -40.0 °C<br>Metric           | Temperature -40.0 °F<br>English          | Comments              |
|-----------------------|--|--|-----------------------|
|                       | 30.3 MPa                                 | 4390 psi                                 |                       |
|                       | @Strain 2.90 %,<br>Temperature 23.0 °C   | @Strain 2.90 %,<br>Temperature 73.4 °F   | 50%RH; ISO 11403-1 -2 |
|                       | 31.31 MPa                                | 4541 psi                                 |                       |
|                       | @Strain 0.600 %,<br>Temperature 0.000 °C | @Strain 0.600 %,<br>Temperature 32.0 °F  | DAM; ISO 11403-1 -2   |
|                       | 37.9 MPa                                 | 5500 psi                                 |                       |
|                       | @Strain 0.800 %,<br>Temperature 0.000 °C | @Strain 0.800 %,<br>Temperature 32.0 °F  | 50%RH; ISO 11403-1 -2 |
|                       | 44.2 MPa                                 | 6410 psi                                 |                       |
|                       | @Strain 0.900 %,<br>Temperature 23.0 °C  | @Strain 0.900 %,<br>Temperature 73.4 °F  | DAM; ISO 11403-1 -2   |
|                       | 50.4 MPa                                 | 7310 psi                                 |                       |
|                       | @Strain 0.800 %,<br>Temperature -40.0 °C | @Strain 0.800 %,<br>Temperature -40.0 °F | 50%RH; ISO 11403-1 -2 |
|                       | 52.7 MPa                                 | 7640 psi                                 |                       |
|                       | @Strain 1.40 %,<br>Temperature 0.000 °C  | @Strain 1.40 %,<br>Temperature 32.0 °F   | 50%RH; ISO 11403-1 -2 |
|                       | 55.3 MPa                                 | 8020 psi                                 |                       |
|                       | @Strain 1.20 %,<br>Temperature 23.0 °C   | @Strain 1.20 %,<br>Temperature 73.4 °F   | DAM; ISO 11403-1 -2   |
|                       | 55.4 MPa                                 | 8040 psi                                 |                       |
|                       | @Strain 40.0 %,<br>Temperature 23.0 °C   | @Strain 40.0 %,<br>Temperature 73.4 °F   | 50%RH; ISO 11403-1 -2 |
|                       | 57.45 MPa                                | 8332 psi                                 |                       |
|                       | @Strain 1.20 %,<br>Temperature 0.000 °C  | @Strain 1.20 %,<br>Temperature 32.0 °F   | DAM; ISO 11403-1 -2   |
|                       | 63.5 MPa                                 | 9210 psi                                 |                       |
|                       | @Strain 2.50 %,<br>Temperature 0.000 °C  | @Strain 2.50 %,<br>Temperature 32.0 °F   | 50%RH; ISO 11403-1 -2 |
|                       | 65.3 MPa                                 | 9470 psi                                 |                       |
|                       | @Strain 1.10 %,<br>Temperature -40.0 °C  | @Strain 1.10 %,<br>Temperature -40.0 °F  | 50%RH; ISO 11403-1 -2 |
|                       | 65.9 MPa                                 | 9560 psi                                 |                       |
|                       | @Strain 1.60 %,<br>Temperature 23.0 °C   | @Strain 1.60 %,<br>Temperature 73.4 °F   | DAM; ISO 11403-1 -2   |
|                       | 72.67 MPa                                | 10540 psi                                |                       |

| Mechanical Properties | Metric                               | English                              | Comments              |
|-----------------------|--------------------------------------|--------------------------------------|-----------------------|
|                       | @Strain 1.40 %, Temperature -40.0 °C | @Strain 1.40 %, Temperature -40.0 °F | DAM; ISO 11403-1 -2   |
|                       | 73.15 MPa                            | 10610 psi                            | DAM; ISO 11403-1 -2   |
|                       | @Strain 1.70 %, Temperature 0.000 °C | @Strain 1.70 %, Temperature 32.0 °F  | DAM; ISO 11403-1 -2   |
|                       | 78.0 MPa                             | 11300 psi                            | DAM; ISO 11403-1 -2   |
|                       | @Strain 4.00 %, Temperature 23.0 °C  | @Strain 4.00 %, Temperature 73.4 °F  | DAM; ISO 11403-1 -2   |
|                       | 79.9 MPa                             | 11600 psi                            | 50%RH; ISO 11403-1 -2 |
|                       | @Strain 24.0 %, Temperature 0.000 °C | @Strain 24.0 %, Temperature 32.0 °F  | 50%RH; ISO 11403-1 -2 |
|                       | 84.2 MPa                             | 12200 psi                            | 50%RH; ISO 11403-1 -2 |
|                       | @Strain 1.60 %, Temperature -40.0 °C | @Strain 1.60 %, Temperature -40.0 °F | 50%RH; ISO 11403-1 -2 |
|                       | 89.79 MPa                            | 13020 psi                            | DAM; ISO 11403-1 -2   |
|                       | @Strain 1.90 %, Temperature -40.0 °C | @Strain 1.90 %, Temperature -40.0 °F | DAM; ISO 11403-1 -2   |
|                       | 92.72 MPa                            | 13450 psi                            | DAM; ISO 11403-1 -2   |
|                       | @Strain 4.20 %, Temperature 0.000 °C | @Strain 4.20 %, Temperature 32.0 °F  | DAM; ISO 11403-1 -2   |
|                       | 101.96 MPa                           | 14788 psi                            | DAM; ISO 11403-1 -2   |
|                       | @Strain 2.40 %, Temperature -40.0 °C | @Strain 2.40 %, Temperature -40.0 °F | DAM; ISO 11403-1 -2   |
|                       | 116.2 MPa                            | 16850 psi                            | 50%RH; ISO 11403-1 -2 |
|                       | @Strain 8.00 %, Temperature -40.0 °C | @Strain 8.00 %, Temperature -40.0 °F | 50%RH; ISO 11403-1 -2 |
| Elongation at Break   | 18 %                                 | 18 %                                 | DAM; ISO 527-1/-2     |
|                       | 40 %                                 | 40 %                                 | 50%RH; ISO 527-1/-2   |
| Tensile Modulus       | 2.00 GPa                             | 290 ksi                              | 50%RH; ISO 527-1/-2   |
|                       | 4.90 GPa                             | 711 ksi                              | DAM; ISO 527-1/-2     |
| Flexural Modulus      | 1.80 GPa                             | 261 ksi                              | 50%RH; ISO 178        |
|                       | 4.50 GPa                             | 653 ksi                              | DAM; ISO 178          |
| Secant Modulus        | 0.0997 GPa                           | 14.5 ksi                             | 50%RH; ISO 11403-1 -2 |
|                       | @Strain 38.0 %, Temperature 80.0 °C  | @Strain 38.0 %, Temperature 176 °F   | 50%RH; ISO 11403-1 -2 |

| Mechanical Properties | 0.127 GPa<br>Metric                    | 18.5 ksi<br>English                    | Comments<br>DAM; ISO 11403-1 -2 |
|-----------------------|--|--|---------------------------------|
|                       | @Strain 30.9 %,<br>Temperature 100 °C  | @Strain 30.9 %,<br>Temperature 212 °F  |                                 |
|                       | <b>0.154 GPa</b>                       | <b>22.3 ksi</b>                        | <b>DAM; ISO 11403-1 -2</b>      |
|                       | @Strain 30.9 %,<br>Temperature 80.0 °C | @Strain 30.9 %,<br>Temperature 176 °F  |                                 |
|                       | <b>0.172 GPa</b>                       | <b>24.9 ksi</b>                        | <b>50%RH; ISO 11403-1 -2</b>    |
|                       | @Strain 19.0 %,<br>Temperature 100 °C  | @Strain 19.0 %,<br>Temperature 212 °F  |                                 |
|                       | <b>0.233 GPa</b>                       | <b>33.8 ksi</b>                        | <b>50%RH; ISO 11403-1 -2</b>    |
|                       | @Strain 14.0 %,<br>Temperature 80.0 °C | @Strain 14.0 %,<br>Temperature 176 °F  |                                 |
|                       | <b>0.306 GPa</b>                       | <b>44.4 ksi</b>                        | <b>DAM; ISO 11403-1 -2</b>      |
|                       | @Strain 12.9 %,<br>Temperature 80.0 °C | @Strain 12.9 %,<br>Temperature 176 °F  |                                 |
|                       | <b>0.31766 GPa</b>                     | <b>46.073 ksi</b>                      | <b>DAM; ISO 11403-1 -2</b>      |
|                       | @Strain 9.40 %,<br>Temperature 100 °C  | @Strain 9.40 %,<br>Temperature 212 °F  |                                 |
|                       | <b>0.356 GPa</b>                       | <b>51.6 ksi</b>                        | <b>50%RH; ISO 11403-1 -2</b>    |
|                       | @Strain 7.50 %,<br>Temperature 100 °C  | @Strain 7.50 %,<br>Temperature 212 °F  |                                 |
|                       | <b>0.428 GPa</b>                       | <b>62.1 ksi</b>                        | <b>50%RH; ISO 11403-1 -2</b>    |
|                       | @Strain 6.00 %,<br>Temperature 80.0 °C | @Strain 6.00 %,<br>Temperature 176 °F  |                                 |
|                       | <b>0.467 GPa</b>                       | <b>67.7 ksi</b>                        | <b>50%RH; ISO 11403-1 -2</b>    |
|                       | @Strain 10.0 %,<br>Temperature 23.0 °C | @Strain 10.0 %,<br>Temperature 73.4 °F |                                 |
|                       | <b>0.542 GPa</b>                       | <b>78.6 ksi</b>                        | <b>50%RH; ISO 11403-1 -2</b>    |
|                       | @Strain 3.60 %,<br>Temperature 100 °C  | @Strain 3.60 %,<br>Temperature 212 °F  |                                 |
|                       | <b>0.607 GPa</b>                       | <b>88.0 ksi</b>                        | <b>DAM; ISO 11403-1 -2</b>      |
|                       | @Strain 3.00 %,<br>Temperature 100 °C  | @Strain 3.00 %,<br>Temperature 212 °F  |                                 |
|                       | <b>0.627 GPa</b>                       | <b>90.9 ksi</b>                        | <b>DAM; ISO 11403-1 -2</b>      |
|                       | @Strain 4.50 %,<br>Temperature 80.0 °C | @Strain 4.50 %,<br>Temperature 176 °F  |                                 |
|                       | <b>0.680 GPa</b>                       | <b>98.6 ksi</b>                        | <b>50%RH; ISO 11403-1 -2</b>    |
|                       | @Strain 2.50 %,                        | @Strain 2.50 %,                        |                                 |

| Mechanical Properties | Temperature 80.0 °C<br>Metric | Temperature 176 °F<br>English | Comments |
|-----------------------|-------------------------------|-------------------------------|----------|
|-----------------------|-------------------------------|-------------------------------|----------|

## Contact Songhan Plastic Technology Co.,Ltd.

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