

## Ascend Performance Materials VYDYNE® R513 Nylon, 13% Glass Reinforced

Category : Polymer , Thermoplastic , Nylon , Nylon 66 , Nylon 66, 10% Glass Fiber Filled

### Material Notes:

Typical property data. VYDYNE is a registered trademark of Solutia Inc.

Order this product through the following link:

[http://www.lookpolymers.com/polymer\\_Ascend-Performance-Materials-VYDYNE-R513-Nylon-13-Glass-Reinforced.php](http://www.lookpolymers.com/polymer_Ascend-Performance-Materials-VYDYNE-R513-Nylon-13-Glass-Reinforced.php)

| Physical Properties                | Metric                | English                   | Comments            |
|------------------------------------|-----------------------|---------------------------|---------------------|
| Density                            | 1.22 g/cc             | 0.0441 lb/in <sup>3</sup> | ASTM D792           |
| Water Absorption                   | 1.0 %                 | 1.0 %                     | 24 hours; ASTM D570 |
| Moisture Absorption at Equilibrium | 2.2 %                 | 2.2 %                     | ASTM D570           |
| Water Absorption at Saturation     | 7.1 %                 | 7.1 %                     | ASTM D570           |
| Linear Mold Shrinkage              | 0.0040 - 0.0080 cm/cm | 0.0040 - 0.0080 in/in     | ASTM D955           |

| Mechanical Properties      | Metric                           | English                               | Comments                     |
|----------------------------|----------------------------------|---------------------------------------|------------------------------|
| Hardness, Rockwell M       | 95                               | 95                                    | ASTM D785                    |
| Tensile Strength, Ultimate | 124 MPa                          | 18000 psi                             | ASTM D638                    |
| Elongation at Break        | 3.0 %                            | 3.0 %                                 | ASTM D638                    |
| Flexural Yield Strength    | 179 MPa                          | 26000 psi                             | ASTM D790                    |
| Flexural Modulus           | 5.50 GPa                         | 798 ksi                               | ASTM D790                    |
| Compressive Yield Strength | 172 MPa                          | 24900 psi                             | at 1% deformation; ASTM D695 |
| Shear Strength             | 76.0 MPa                         | 11000 psi                             | ASTM D732                    |
| Izod Impact, Notched       | 0.500 J/cm<br>@Thickness 3.17 mm | 0.937 ft-lb/in<br>@Thickness 0.125 in | ASTM D256                    |

| Thermal Properties                          | Metric                                    | English                                     | Comments              |
|---|---|---|-----------------------|
| CTE, linear                                 | 27.0 $\mu\text{m}/\text{m}\cdot\text{°C}$ | 15.0 $\mu\text{in}/\text{in}\cdot\text{°F}$ |                       |
|   | @Temperature -40.0 - 82.0 $\text{°C}$     | @Temperature -40.0 - 180 $\text{°F}$        |                       |
| Melting Point                               | 260 $\text{°C}$                           | 500 $\text{°F}$                             | ASTM D1525            |
| Deflection Temperature at 1.8 MPa (264 psi) | 245 $\text{°C}$<br>@Thickness 3.17 mm     | 473 $\text{°F}$<br>@Thickness 0.125 in      | Unannealed; ASTM D648 |

| Flammability 18.94<br>Thermal Properties | HP<br>Metric | HP<br>English | Comments   |
|--|--------------|---------------|------------|
| Oxygen Index                             | 25 %         | 25 %          | ASTM D2863 |

## Contact Songhan Plastic Technology Co.,Ltd.

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