

## Ascend Performance Materials Vydyne® 21SPC Nylon 66, Conditioned

Category: Polymer, Thermoplastic, Nylon, Nylon 66

## **Material Notes:**

Vydyne® 21SPC is a general-purpose PA66 resin available in natural color. It is designed principally for injection-molding fabrication. This resin offers a well balanced combination of engineering properties characterized by high strength; rigidity; good toughness, high melt point, good surface lubricity; abrasion resistance and resistance to many chemical, machine and motor oils, solvents and gasoline. Vydyne 21SPC permits production of molded parts with good initial color plus good property and color retention when using regrind. This resin is recognized by Underwriters Laboratories and conforms to the requirements of many industrial, federal and military specifications for premium-quality, general-purpose PA66 resins. Internally and externally lubricated for improved machine feed and exceptional mold release. Vydyne 21SPC is intended for use in high-productivity applications. In many applications, the molding cycle can be reduced because parts may be removed from the cavity at higher temperatures. In difficult molds where parts have a tendency to stick in the cavity. Vydyne 21SPC can reduce or eliminate the need for mold release sprays. Critical molded-part dimensions should be checked against specifications before implementing shorter molding cycles on a routine production basis. Typical Applications/End Uses: Vydyne 21 SPC has been used in many molding applications such as terminal blocks bearings, bushings, cams, electrical connectors and housings, electrical cable ties/tie straps and many other hardware and general industrial parts. Availability: Asia Pacific EuropeNorth America Additive: Lubricant Features: Fast Molding Cycle Gasoline Resistance General Purpose Good Abrasion Resistance Good Chemical Resistance Good Mold Release Good Toughness High Rigidity High Strength Lubricated Oil Resistant Solvent

ResistantUses:BearingsBushingsCamsConnectorsHousingsIndustrial ApplicationsAppearance: Natural ColorForms: PelletsProcessing Method: Injection MoldingInformation provided by Ascend

## Order this product through the following link:

http://www.lookpolymers.com/polymer\_Ascend-Performance-Materials-Vydyne-21SPC-Nylon-66-Conditioned.php

| Physical Properties                | Metric             | English              | Comments                     |
|------------------------------------|--------------------|----------------------|------------------------------|
| Specific Gravity                   | 1.14 g/cc          | 1.14 g/cc            | ISO 1183                     |
| Water Absorption                   | 1.2 %              | 1.2 %                | 24 hrs; ISO 62               |
| Moisture Absorption at Equilibrium | 2.4 %              | 2.4 %                | Equilibrium at 50%rh; ISO 62 |
| Linear Mold Shrinkage              | 0.018 cm/cm        | 0.018 in/in          | ISO 294-4                    |
|                                    | @Thickness 2.00 mm | @Thickness 0.0787 in |                              |
| Linear Mold Shrinkage, Transverse  | 0.017 cm/cm        | 0.017 in/in          | ISO 294-4                    |
|                                    | @Thickness 2.00 mm | @Thickness 0.0787 in |                              |

| Mechanical Properties     | Metric   | English  | Comments  |
|---------------------------|----------|----------|-----------|
| Tensile Strength at Break | 45.0 MPa | 6530 psi | ISO 527-2 |
| Tensile Strength, Yield   | 55.0 MPa | 7980 psi | ISO 527-2 |
| Elongation at Break       | >= 50 %  | >= 50 %  | ISO 527-2 |
|                           |          |          |           |



| Mechanical Properties      | Metric                  | 25 %<br>English            | Comments    |
|----------------------------|-------------------------|----------------------------|-------------|
| Tensile Modulus            | 1.40 GPa                | 203 ksi                    | ISO 527-2   |
| Flexural Strength          | 50.0 MPa                | 7250 psi                   | ISO 178     |
| Flexural Modulus           | 1.50 GPa                | 218 ksi                    | ISO 178     |
| Izod Impact, Notched (ISO) | 7.00 kJ/m²              | 3.33 ft-lb/in <sup>2</sup> | ISO 180     |
|                            | @Temperature -30.0 °C   | @Temperature -22.0 °F      |             |
|                            | 20.0 kJ/m <sup>2</sup>  | 9.52 ft-lb/in <sup>2</sup> | ISO 180     |
|                            | @Temperature 23.0 °C    | @Temperature 73.4 °F       |             |
| Charpy Impact Unnotched    | NB                      | NB                         | ISO 179/1eU |
|                            | @Temperature -30.0 °C   | @Temperature -22.0 °F      |             |
|                            | NB                      | NB                         | ISO 179/1eA |
|                            | @Temperature 23.0 °C    | @Temperature 73.4 °F       |             |
| Charpy Impact, Notched     | 0.700 J/cm <sup>2</sup> | 3.33 ft-lb/in <sup>2</sup> | ISO 179/1eA |
|                            | @Temperature -30.0 °C   | @Temperature -22.0 °F      |             |
|                            | 2.00 J/cm <sup>2</sup>  | 9.52 ft-lb/in <sup>2</sup> | ISO 179/1eA |
|                            | @Temperature 23.0 °C    | @Temperature 73.4 °F       |             |

## **Contact Songhan Plastic Technology Co.,Ltd.**

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