

Vydyne 22HSPCN NT0856 is a general-purpose, unfilled, lubricated, heat stabilized PA66 resin. Designed principally for injection-molding fabrication, this product offers a combination of engineering properties characterized by high strength; rigidity; good toughness; high melt point; good surface lubricity; abrasion resistance; and resistance to many chemicals, machine and motor oils, solvents and gasoline. this product is designed to resist thermal degradation when exposed to warm climates.

## General

|                   |  |   |  |
|-------------------|--|---|--|
| Additive          | • Heat Stabilizer  | • Lubricant   | • Release agent  |
| Features          | • Abrasion Resistance<br>• General Purpose<br>• Good Strength<br>• Thermal Stability | • Chemical Resistant<br>• Good Heat Resistance<br>• Good Tensile Strength | • Gasoline Resistant<br>• Good Stiffness<br>• Lubricated |
| Appearance        | • Natural Color  |   |  |
| Forms             | • Pellets  |   |  |
| Processing Method | • Injection Molding  |   |  |

## Physical

|                             | dry  | cond. | Unit              | Test Standard |
|-----------------------------|------|-------|-------------------|---------------|
| Density                     | 1.13 | -     | g/cm <sup>3</sup> | ISO 1183      |
| Molding Shrinkage           |      |       |                   | ISO 294-4     |
| Across Flow : 23°C, 2.00 mm | 1.7  | *     | %                 |               |
| Flow : 23°C, 2.00 mm        | 1.6  | *     | %                 |               |
| Water Absorption            |      |       |                   | ISO 62        |
| 23°C, 24 hr                 | 1.7  | *     | %                 |               |
| Equilibrium, 23°C, 50% RH   | 2.9  | *     | %                 |               |

## Mechanical

|                              | dry  | cond. | Unit | Test Standard |
|------------------------------|------|-------|------|---------------|
| Tensile Modulus (23°C)       | 3300 | 1200  | MPa  | ISO 527-2     |
| Tensile Stress (Yield, 23°C) | 87   | 52    | MPa  | ISO 527-2     |
| Tensile Stress (Break, 23°C) | 55   | 46    | MPa  | ISO 527-2     |
| Tensile Strain (Yield, 23°C) | 4.9  | 22    | %    | ISO 527-2     |
| Tensile Strain (Break, 23°C) | 22   | >50   | %    | ISO 527-2     |
| Flexural Modulus (23°C)      | 3000 | 1000  | MPa  | ISO 178       |
| Flexural Strength (23°C)     | 104  | 31    | MPa  | ISO 178       |
| Poisson's Ratio (23°C)       | 0.4  |       |      | ISO 527-2     |

| Impact                           | dry | cond. | Unit              | Test Standard |
|----------------------------------|-----|-------|-------------------|---------------|
| Charpy Notched Impact Strength   |     |       |                   | ISO 179/1eA   |
| +23°C                            | 4.6 | 18    | kJ/m <sup>2</sup> |               |
| -30°C                            | 4.9 | 4.7   | kJ/m <sup>2</sup> |               |
| -40°C                            | 4.1 | 4     | kJ/m <sup>2</sup> |               |
| Charpy Unnotched Impact Strength |     |       |                   | ISO 179/1eU   |
| +23°C                            | N   | N     | kJ/m <sup>2</sup> |               |
| -30°C                            | N   | N     | kJ/m <sup>2</sup> |               |
| -40°C                            | N   | N     | kJ/m <sup>2</sup> |               |
| Notched Izod Impact Strength     |     |       |                   | ISO 180/1A    |
| +23°C                            | 4.8 | 19    | kJ/m <sup>2</sup> |               |
| -30°C                            | 4.7 | 5.2   | kJ/m <sup>2</sup> |               |
| -40°C                            | 4.5 | 5.1   | kJ/m <sup>2</sup> |               |

| Thermal                          | dry | cond. | Unit  | Test Standard |
|----------------------------------|-----|-------|-------|---------------|
| Heat Deflection Temperature      |     |       |       | ISO 75-2/A    |
| 1.80 MPa, Unannealed             | 67  | -     | °C    |               |
| 0.45 MPa, Unannealed             | 199 | -     | °C    |               |
| Melting Temperature              | 260 | *     | °C    | ISO 11357-3   |
| CLTE                             |     |       |       | ISO 11359-2   |
| Flow : 23 to 55°C, 2.00 mm       | 112 | *     | E-6/K |               |
| Transverse : 23 to 55°C, 2.00 mm | 103 | *     | E-6/K |               |

| Electrical                    | dry     | cond.   | Unit  | Test Standard |
|-------------------------------|---------|---------|-------|---------------|
| Volume Resistivity (1.00 mm)  | 2.44E15 | 4.19E10 | Ohm*m | IEC 60093     |
| Dielectric Strength (1.00 mm) | 30      | 23      | kV/mm | IEC 60243     |

| Injection                     | Value     | Unit |
|-------------------------------|-----------|------|
| Drying Temperature            | 70        | °C   |
| Drying Time                   | 1 - 3     | h    |
| Rear Temperature              | 260 - 280 | °C   |
| Middle Temperature            | 270 - 285 | °C   |
| Front Temperature             | 280 - 290 | °C   |
| Nozzle temperature            | 280 - 300 | °C   |
| Processing (Melt) Temperature | 285 - 300 | °C   |
| Mold Temperature              | 65 - 95   | °C   |



**North America**  
+1 888 927 2363

**Europe**  
+32 10 608 600

**Asia**  
+86 21 2315 0888

## Disclaimer

NOTICE: Although the information and recommendations set forth herein (hereinafter "information") are presented in good faith and believed to be correct as of the date hereof, Ascend Performance Materials Operations makes no representation or warranties as to the completeness of accuracy thereof.

Information is supplied upon the condition that the persons receiving same will make their own determination as to its suitability for their purpose prior to use. In no event will Ascend Performance Materials Operations be responsible for damages of any nature whatsoever resulting in the use of or reliance upon information or the products to which information refers. Nothing contained herein is to be construed as a recommendation to use any product, equipment or formulation in conflict with any patent, and Ascend Performance Materials Operations makes no representation or warranty, express or implied, that use thereof will not infringe any patent. No representation or warranties, either express or implied, of merchantability fitness for a particular purpose or of any other nature are made hereunder with respect to information or product to which information refers.

CAUTION: Do not use Ascend Performance Materials Operations MED grades in medical applications involving implantation in the human body or contact with internal body fluids or tissues for extended periods of time.