

# application profile: **cooling fan**

In the automotive industry, you need PA66 products that perform to a higher standard. Vydyne<sup>®</sup> resins and compounds help you get the most out of every part you produce. For under-the-hood applications, Vydyne products deliver superior chemical and heat resistance. For exterior and interior components, Vydyne offers versatile, reliable and customizable resins. Our quality and consistency make the difference in your production efficiency.

### Products Used: R860, R533H, R530H

**Benefits:** Stiffness • Vibration Minimization • Dimensional Stability • Temperature Resistance • Chemical Resistance

#### **Application Description**

The cooling fan shown is for an electric cooling fan system made with R860. R533H or R530H can also be used for the engine-driven fans as well.

## The Challenge

The cooling fan is a critical component in the cooling system. The stiffness, dimensional stability and temperature resistance help maintain the positioning of the fan

> blades to provide optimum performance. The natural damping characteristics of the Vydyne PA66 help eliminate vibration that leads to NVH issues. Also, the chemical resistance of the PA66 eliminates problems with typical automotive chemicals.

#### **The Vydyne Difference**

Ascend's Vydyne R860 is ideal for this application because of its superior stiffness and temperature resistance. Alternatively, Vydyne R533H and R530H bring to the application an optimal balance of stiffness, damping characteristics and chemical resistance for engine-driven fans. And Vydyne PA66 resins can be more cost effective than competing resin systems. The Ascend automotive team used mold flow analysis and years of cooling fan experience to create optimal parts for Ford,<sup>®</sup> General Motors<sup>®</sup> and Chrysler.<sup>®</sup>

For more information, see your Ascend representative or visit www.ascendmaterials.com.

R860, R533H, R530H					
Property*	Method	Units	R860	R533H	R530H
Density	ISO 1183	g/cm <sup>3</sup>	1.47	1.4	1.37
Tensile Strength	ISO 527-2	MPa	120	204	195
Flexural Modulus	ISO 178	MPa	9,000	9,700	9,100
Notched Izod	ISO 180	kJ/m <sup>2</sup>	5.6	12	11
DTUL @ 1.8 MPa	ISO 75-2/A	°C	215	250	245

\*Dry as molded (DAM)

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