ASCEND PERFORMANCE MATERIALS

application profile:

thermostat housing

vydyne pa 66®

In the automotive industry, you need PA66 products that perform to a higher standard. Vydyne® 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: R530H (black)
Benefits: Hydrolysis Resistance • Temperature Resistance • Strength • Stiffness • Dimensional Stability

Application Description

Pictured below is a thermostat housing used in a major, North American 2.0L I-4 engine. The housing encases a thermostat to regulate the flow of coolant into the radiator and maintain appropriate operating temperature.

The Challenge

To prevent parts failure, thermostat housings must be molded from materials with excellent hydrolysis resistance and dimensional stability. Strength and stiffness are also necessary for optimal performance. Plastics without these characteristics will not maintain a seal over years of vehicle use, which can lead to immobility and engine damage.

R530H			
Property	Method	Units	DAM
Density	ISO 1183	g/cm^3	1.37
Tensile Stress	ISO 527-2	MPa	195
Flexural Modulus	ISO 178	MPa	9,100
Notched Izod	ISO 180	kJ/m^2	11
DTUL @ 1.8 MPa	ISO 75-2/A	°C	245

The Vydyne Difference

Using Ascend's Vydyne R530H ensures that this piece creates a perfect seal to the engine block to maintain integrity throughout years of vehicle use. Vydyne R530H has been used in vehicles from companies such as General Motors,® Ford® and Chrysler.® This resin meets all material and end-use requirements. Vydyne resins are used for many other thermal-system applications as well.

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