



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: R533H, R530H

Benefits: Weldability • Chemical Resistance • Superior Mold Flow • Burst Resistance • Dimensional Stability

Application Description

Below is a fuel rail used by a leading, global tier-one company. These fuel rails and others of similar design are used in most North American-made auto engines. The detail photo shows the self-retaining hose barb. This allows the crossover tube on “V” type engines to be assembled without any hose clamps. The fuel rail capitalizes on PA66’s inherent resistance to gasoline and other fuels. In this application, PA66 shows a cost-versus-performance benefit over materials such as PPA and PPS.

The Challenge

The critical challenge in fuel rails is to mold a part without moving the fine core pulls. Vydyne PA66 offers superior mold flow, so lower molding pressures are used and the cores will not move. The ease of mold filling helps minimize the impact of knit lines and allows the parts to have outstanding burst strength.



The Vydyne Difference

Ascend’s Vydyne PA66 is ideal for this application because of its superior burst resistance and chemical resistance. The high flow of the product allows the complex fuel rail to be molded with ease. This product also allows features to be added via simple welding operations. The Ascend automotive team uses mold flow analysis and years of automotive experience to create optimal parts for Ford®, General Motors®, Chrysler® and Toyota®.

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

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

*Dry as molded (DAM)