ASCEND PERFORMANCE MATERIALS

vydyne pa 66

AUTOMOTIVE APPLICATION PROFILES

Charge Air Cooler (CAC)

HT Series

We understand that in the automotive industry, you need reliable materials that perform to a higher standard. Ascend offers a comprehensive portfolio of engineered plastics for challenging automotive applications. We work with our customers to achieve the very best from our products. That's why we offer a worldwide support network of application specialists and technical experts. Our material knowledge and expertise in automotive systems can help you improve part performance and reduce material usage and cycle times.

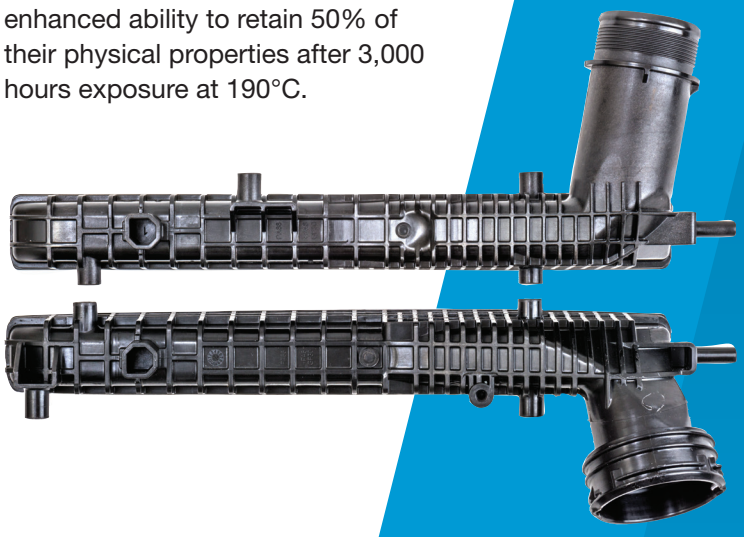
Products Used: **R530HT, R535HT, R550HT**

Application Description

As a subsystem in turbocharged engines, charge air coolers play a critical role in new engine designs. Routing high-temperature air into the intercooler places significant demand on the charge air cooler. To make a reliable charge air cooler, you need a material that can withstand prolonged exposure to high temperatures. That material also needs stiffness, chemical resistance and dimensional stability, and it needs to keep these properties after heat aging.

The Vydyne Difference

Vydyne HT Series is a portfolio of heat-resistant glass-filled PA66 grades designed to ensure part reliability in demanding automotive applications, like charge air coolers. HT Series grades are ideal because of their enhanced ability to retain 50% of their physical properties after 3,000 hours exposure at 190°C.



Benefits

- Stiffness
- Vibration minimization
- Dimensional stability
- Temperature resistance
- Chemical resistance

Product Properties

R530HT, R535HT, R550HT					
Property*	Test Method	Units	R530HT	R535HT	R550HT
Density	ISO 1183	g/cm^3	1.37	1.41	1.58
Tensile Strength	ISO 527-2	MPa	185	200	235
Flexural Modulus	ISO 178	MPa	8,800	10,200	15,500
Notched Izod	ISO 180	kJ/m^2	11	14	17
DTUL @ 1.8 MPa	ISO 75-2/A	°C	248	240	240

*Dry as molded (DAM)

Application Development and Support

Our automotive applications team relies on years of industry experience and CAE support for tooling to help you optimize your system design. For more information, contact our expert applications specialists or visit **ascendmaterials.com**.

Ascend Performance Materials is the world's largest fully integrated producer of nylon 6,6 resin. We manufacture and reliably supply world-class plastics, fibers and chemicals that are used in thousands of everyday applications such as car parts, electronics and cable ties.

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