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PRESS INFORMATION

Engine temperatures under control with Grivory HT

For more than a decade, Grivory HT high-performance polyamides have been used as preferred materials for components in cooling-water management systems of combustion engines. These materials are extremely successful, especially when in contact with hot water and cooling agents.

Starting already ten years ago, the innovative pump manufacturer Melling do Brasil began to use thermoplastic materials for production of water pump impellers. The initial materials of choice were glass-fibre reinforced PPS although it quickly became clear that these were unsuitable due to their brittleness and tendency to form burrs. Another reason was that the impellers could not be manufactured freely falling as this already caused them to break. With support from the Brazilian representative for EMS-GRIVORY, the Master Polymers Company and the application development department in Ems and using hydrolysis-resistant grades of Grivory HT1V HY, the ideal material for production of the impeller was quickly found.

Perfect for contact with hot water and cooling agents

The high-performance polyamides Grivory HT1V-4 HY and HT1V-5 HY, with 40 resp. 50% glass-fibre content, are especially modified for use in contact with hot water and cooling agents. They are characterised by excellent resistance to chemicals and hydrolysis while rounding off their property profile with very good dimensional stability and high stiffness and strength values. Their special resistance in contact with different water-glycol mixtures at cooling-agent temperatures of 120°C and above predestine these materials for use in the manufacture of components for automotive cooling systems.

Melling do Brasil is an important supplier to the Brazilian automotive industry. As leader in the development and manufacture of feed pumps for oil, cooling water and fuel, Melling do Brasil has established itself as preferred development partner of the local original equipment manufacturers and in numerous applications,

relies on high-performance materials from EMS-GRIVORY.

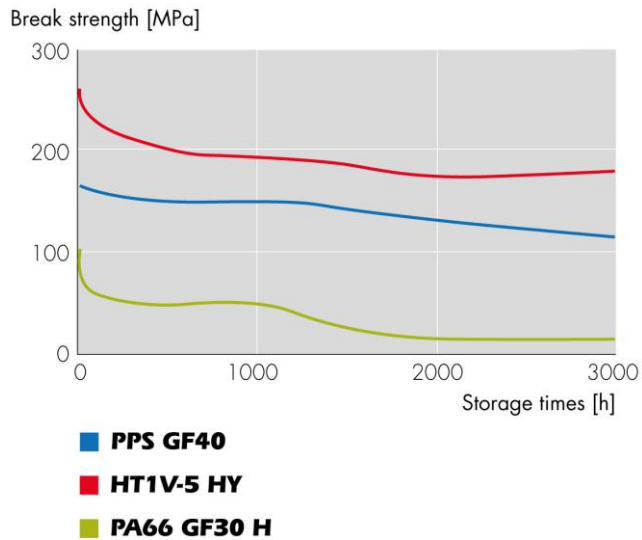
Successful use of Grivory HT1V-4 HY and HT1V-5 HY as construction material for the impellers was so convincing that only a short time later, the housing of the water pumps was also being made of EMS material. This provides twice the benefit for Melling do Brasil: Along with reduced manufacturing costs, weight savings of up to 25% could also be achieved with the new pump housings compared to conventional water pumps with aluminium die-cast cases. In this way, the housings contribute towards reducing fuel consumption of the vehicles.

Applications such as this one are an impressive illustration of why the many specific grades of the high-quality material Grivory HT with their strong high-performance property profiles, are so often and so successfully selected as construction material.

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Storage in water/glycol 1/1 at 120°C
Grivory HT1V-5 HY best hydrolysis resistance



Picture: Melling housing pump and impeller made of Grivory HT1V-4 HY black 9205 / Grivory HT1V-5 HY black 9205.



Contact for technical questions

Albert Flepp
Product Manager Grivory HT
Tel. +41 81 632 76 99
E-Mail: albert.flepp@emsgrivory.com



Contact for the press

Andreas Müller
Head of Communication
Tel. +41 81 632 72 50
E-Mail: andi.mueller@emsgrivory.com

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