

## Huntsman Launch Paste for Marine Sector



Huntsman Advanced Materials has a new solution for making plugs and moulds for the marine sector whilst offering cost savings and time intensive production processes through its range of RenPaste epoxy seamless modelling pastes.

According to Huntsman, seamless modelling pastes (SMPs) have a number of distinct advantages. For example, they offer excellent milling characteristics. Once milled, no joints or voids are visible and the material is seamless. They also provide greater dimensional accuracy and make it possible for complex shapes to be constructed. Less operator skill is required and less finishing is needed to prepare the surface.

Huntsman advises its customers that an SMP paste should perform consistently to allow fast application while avoiding replication and costly repair work. They say that epoxy SMPs tend to be slightly more expensive than PU. However, in offering low shrinkage, excellent dimensional stability and a consistent high performance in application and use, epoxy SMPs are now very much in demand.

Huntsman say that hand application is increasingly being replaced by using a robotic arm or CNC machine to apply the paste automatically. This allows an increase in application rate up to 5 kgs per minute as well as the accurate control of the thickness of the paste. In general, it is only necessary to remove a few millimetres of material during milling. This less labour intensive process saves both time and material. They explain that when applied by hand, the paste tends to be thicker and the application inconsistent, resulting in additional material waste. RenPaste 4666 has been designed for machine systems while still being suitable for refined hand application as well. This has been achieved through the 'chemical thixotropy' concept developed by Huntsman which allows the user to alter the SMP rheology by simply changing the mixing parameters.

They explain that the 'chemical thixotropy', a Programmable Paste Rheology (PPR) concept changes the SMP's characteristics from a fluid that can be applied quickly in thickness up to 10mm, to a viscous material capable of up to 40mm thick, with no slump on vertical surfaces and without excessive exotherm. The user can select the paste rheology required for individual jobs – from high speed automated application to thick hand application.

They claim that whichever application method is used, the SMP's adjustable rheology reduces the need for additional repairs or re-working of the model. In addition, the fine surface quality obtained after milling of RenPaste 4666 reduces any further finishing time. They say the paste also exhibits excellent dimensional stability and low shrinkage on precision models.

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