

PRESS RELEASE

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Leading Composite Kayaks Manufacturers Use Latest Epoxy Bonding Gel-Coat Technology

Two world leading designers and manufacturers of epoxy resin based composite kayaks, Hangzhou Epic Boat Co. Ltd, based in China and Nelo M.A.R. Kayaks Lda, located in Portugal, are now using the latest polyester 'epoxy bonding' spray gelcoat technology from Scott Bader, replacing a vinyl ester gelcoat for the hulls and decks of some of the kayaks they make and supply around the world for recreational touring, ocean and slalom racing. The result has been higher quality, an improvement in weathering performance and significant manufacturing productivity gains for both companies with Crystic® GC 253PA epoxy bonding gelcoat.

The changeover by Hangzhou Epic Boat Co from using a vinyl ester gel-coat to a polyester epoxy bonding gelcoat was driven by two key factors: improving product quality and reducing costs. In production, the vinyl ester gelcoat required both back surface preparation and a tiecoat to be applied prior to infusing the epoxy resin laminate structure. Significant productivity gains and significant cost savings have been achieved as no back surface preparation or tiecoat is required with Crystic® GC 253PA. Overall de-mould times are further reduced as Crystic® GC 253PA is tack free in under two hours, so the backup delay time is also shorter.

The designs and composite technology used by Hangzhou Epic Boat Co. Ltd, which is part of Epic Kayaks, Inc. USA, originates from the extensive development work done by the co founders of Epic Kayaks, Greg Barton, a two times Olympic Gold Medalist and Oscar Chalupsky, eleven times World Molokai solo ocean racing champion, who focus on building kayaks which are extremely light but strong. The epoxy kayaks made by Hangzhou Epic Boat Co. Ltd in China in their new purpose built factory in Zhejiang province, which use Crystic® GC 253PA polyester epoxy bonding spray gelcoat, supplied by Scott Bader Asia Pacific; the new factory started production in early 2009.

More recently Nelo M.A.R. Kayaks Lda, who has built canoes and kayaks since 1978 and manufactured over 30 000 craft, has also started using Crystic® GC 253PA spray gelcoat in the production of a number of their high performance competition racing kayaks, which are mainly carbon fibre and Kevlar reinforced. Nelo has a 5000 sq. metre factory located in Vila do Conde, near Porto, in northern Portugal and claims to now be the largest racing canoe and kayak manufacturer in the world. Nelo design all their craft in-house, using naval architects and R&D engineers who test all new products using their own prototyping machinery.

Decatlo Desportos E Composites, the official composites distributor for Scott Bader in Portugal, has been a key supplier to Nelo for over 20 years. A representative from Decatlo, who has worked closely with Nelo on many composites development projects over the years, commented: *"They chose Crystic GC 253PA epoxy bonding spray gelcoat for several reasons, but the two most important aspects for Nelo were the outstanding adhesion to epoxy resin, which they see as*

'best in class' and the consistent high quality of the Crystic gelcoat, with no noticeable colour variation between the epoxy bonding gelcoat batches supplied to them."

Spray trials by both companies with Crystic® GC 253PA have successfully demonstrated it to be robust, sag resistant and easy to handle. All Crystic® epoxy bonding gelcoats in the range have significantly improved weathering performance compared with either a vinyl ester or epoxy gelcoat. As part of its rigorous R & D product development, Scott Bader independently tests all its gelcoats for 12 months under extreme UV resistance and durability test conditions in Florida, USA.

The Crystic® Epoxy Bonding gel-coat range has brush, spray, low odour and fire retardant options. All are pre-accelerated, isophthalic gelcoats, which use a standard MEKP catalyst, designed for use in the wind energy, marine, building and transportation markets to provide a reliable, permanent bond with wet lay or prepreg epoxy resin systems. Further details about the Crystic® Epoxy Bonding gelcoat range are available from Scott Bader at www.scottbader.com, by sending an e mail to composites@scottbader.com or by contacting a local Scott Bader representative or the official regional distributor listed on their website.



Nelo chose Crystic GC 253PA epoxy bonding spray gelcoat due to its outstanding adhesion to epoxy resin and consistent batch to batch quality.

Crystic® 253PA epoxy bonding gelcoat is tack free in less than 2 hours and needs no back surface preparation or a tiecoat, yet still achieves excellent long term adhesion to the epoxy back up resin.





Epic 'Touring' model kayak. The choice of epoxy resin and sandwich core construction used makes them much lighter than most touring kayaks.

About Scott Bader

Scott Bader was established in 1921. Today it is a £180 million multinational chemical company, employing 560 people worldwide. It is a common trusteeship company, having no external shareholders, with a strong commitment to supporting its workforce, society and the environment. The Scott Bader headquarters is based in the UK where they have purpose-built, state-of-the-art Technical facilities that provide R & D as well as complete evaluation, testing and application support. They have manufacturing facilities in the UK, France, Croatia, The Middle East and South Africa. For further information regarding Scott Bader, please call +44 (0) 1933 663100, visit www.scottbader.com or e-mail info@scottbader.com.