

## Press Release

### **65.1m Free Fall for Offshore FRP Lifeboat Bonded with Crestomer® 1152PA Structural Adhesive**

Umoe Schat-Harding Equipment AS (USH) has successfully achieved another free fall record for its rapid evacuation 'free fall' (FF) class lifeboats, as used on rigs and other off shore installations. This latest drop of 65.1 metres was achieved in May 2013 by USH's updated and improved FF1200 fibreglass lifeboat. This drop test is part of a revised DNV-OS-E406 standard for free fall lifeboats used in the Norwegian offshore sector. As rigs and installations get even bigger, the industry has recognised the need for improved free fall lifeboat designs which can drop safely and intact from greater heights and in extreme weather sea conditions.

To fully validate the free fall drop test, the FF1200 lifeboat was internally loaded with seven tonnes to simulate its maximum harnessed seated capacity of 70 people in an actual emergency drop evacuation from an offshore installation, such as an oil rig. The new FF1200 successfully passed the more stringent DNV-OS-E406 standard for a free fall lifeboat. On impact with the surface of the water, the nose section has to withstand an estimated force of 45 Tonnes. After impact, the lifeboat fully submerges to a depth of over 10 metres before resurfacing. The latest FF1200 design is the first free fall lifeboat to successfully pass all the full-scale tests set by the new requirements in the revised DNV-OS-E406 standard; this is the accepted standard against which all free fall GRP lifeboats used on the Norwegian Continental Shelf are now being built.

As with previous versions, this latest FF1200 design has fibreglass reinforced and cored laminate structures for its hull, top section and canopy. To increase shop floor productivity and improve the impact performance of the lifeboat's GRP body, the Schat-Harding engineers made a number of design modifications. This included the increased use of Crystic® Crestomer® structural adhesive for GRP to GRP bonding. In the latest FF1200 design, Crestomer 1152PA is not only specified for bonding in bulkheads, a proven Crestomer application in Schat-Harding free fall lifeboat hulls for many years, but also for the hull stringers, and to join the GRP interliners and canopy to the main hull section. To achieve the higher production rates needed, Crestomer adhesive is applied using automated bulk dispensing equipment and pneumatic hand guns. Arvid Skogseide, factory manager for Schat-Harding stated *"The Crestomer range gives us opportunities to increase our speed of production and at the same time keeping the quality of our lifeboats to the highest standards set by the offshore industry. Scott Bader and its unique structure with commonwealth ownership, excellent products and their focus on innovation gives us full confidence in both product performance and a solid supplier relationship."*

Crestomer 1152PA is pre-accelerated and MEKP cured, supplied in 25 Kg pails and 200 Kg drums. It is suitable for gap filling up to 25mm, with a geltime of 50 minutes (2% w/v catalyst, 25°C). For bigger GRP sections, typically over 25 metres, or in much hotter ambient conditions, there is the option to use Crestomer 1153PA, which provides a longer geltime of up to 90 minutes.

As with all products in the range, Crestomer 1152PA has DNV approval, RINA and Lloyds Acceptance (Statement of Acceptance MATS/1785/3), which cover structural adhesives for use in the most critical FRP bonding applications. According to published Scott Bader technical data, Crestomer 1152PA exhibits typical GRP to GRP lap shear bond joint strengths of 10MPa, as measured to BS ISO 4587:2003 test conditions; the limiting factor is FRP substrate failure not the Crestomer adhesive joint strength.

The full range of Crystic Crestomer urethane acrylate based structural adhesives has been specially developed by Scott Bader for marine, building and construction applications. Crestomer structural adhesives have been proven in use for over 30 years by leading FRP boat builders all over the world for a variety of hull and deck bonding applications. For more information about Scott Bader and its composites products go to [www.scottbader.com](http://www.scottbader.com).

**End.**

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**Websites of companies in this press release:** [www.scottbader.com](http://www.scottbader.com) [www.schat-harding.com](http://www.schat-harding.com)



**Photos** (All photos courtesy of Umoe Schat-Harding Equipment AS.)

**Photo 1** - Schat- Harding new FF1200 free fall lifeboat test- May 2013

**Photo 1 Caption:** The redesigned FF1200 successfully passed the more stringent DNV-OS-E406 standard for an off shore free fall lifeboat, setting a record drop of 65.1 metres.



**Photo 2** - Schat- Harding new FF1200 free fall lifeboat test emerging from the sea - May 2013

**Photo 2 Caption:** After impact, the FF1200 lifeboat fully submerges to a depth of over 10 metres before resurfacing.



**Photo 3** - Schat-Harding FF1200 hull bulkhead bonded in with Crystic Crestomer 1152PA

**Photo 3 Caption:** In this latest FF1200 design, Crestomer 1152PA is not only specified for bonding hull bulkheads but now also for bonding the stringers and to join the GRP interliners and canopy to the main hull section.



**Photo 4** - Schat-Harding FF1200 hull stringer bonded with Crystic Crestomer 1152PA

**Photo 4 Caption:** In combination with using automated bulk dispensing equipment, Schat-Harding shop floor productivity has been significantly increased by using Crystic Crestomer 1152PA to bond in the hull stringers.

### **About Scott Bader**

Scott Bader was established in 1921. Today it is a €225 million global chemical company, employing over 600 people worldwide. It is a common trusteeship company, having no external shareholders, with a strong commitment to support its customers, workforce and the environment.

Scott Bader's 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. It has manufacturing facilities in Europe, The Middle East, South Africa, Canada and India.

For further information regarding Scott Bader, please call +44 (0)1933 666638, visit [www.scottbader.com](http://www.scottbader.com) or e-mail: [info@scottbader.com](mailto:info@scottbader.com)