

Press  
release



**SurvivalOne**

Heidenheim, April 2011

## **Survival-One designed new helicopter passenger survival suit with Outlast® technology**

Increased survival chances without sacrificing comfort

Water is a dangerous place with unpredictable elements. But with some jobs and activities it is not possible to just stay away from it. To get to offshore installations there is no other choice than to fly over water. So if a risk can't be avoided it is essential to take every precaution to minimize it. Survival-One Limited, recognized world leader in the design, manufacture and service survival clothing and equipment, has recently launched a new helicopter passenger survival suit incorporating Outlast® technology for better comfort.

"Survival-One manage a fleet of around 30,000 helicopter passenger survival suits for use by the offshore oil and gas industry", explains Andy Wilson, Design & Development Manager at Survival-One Limited, Aberdeen/United Kingdom. "We are experienced in providing survival solutions but we are always interested in innovation. We don't want to look just for fulfilling specifications. We want to offer ultimate protection for workers without compromising human factors. Our latest development is the new 1000 Series suit which has now entered service, being worn over the North Sea. We are using Outlast® materials to enable offshore workers to benefit from enhanced insulation that regulates the microclimate inside the suit to improve thermal comfort and reduce thermal stress. The elevated thermal insulation worn to address the effects of long term immersion in water (typically less than 10°C) can cause heat stress to the wearer and utilizing Outlast® technology is one means of mitigating against this."

"You can't fight the sea, but by drawing on design knowledge, experience and the latest enabling technologies you can increase the effectiveness and efficiency of survival mechanism and protective equipment. We have achieved a real break-through with this next generation of survival suit. It delivers maximum protection without sacrificing comfort."

The core business of Survival-One is concerned with the provision of helicopter survival suits, either for hire or outright purchase, to the offshore oil and gas industry. Such suits are worn by passengers and aircrew during helicopter transit to and from offshore oil and gas installations and are designed to provide protection against cold water immersion in the event of the helicopter ditching at the sea. The need for helicopter passenger and aircrew immersion suits has developed with the growth of the offshore oil and gas industry. Offshore installation personnel are transported daily to and from offshore installations by helicopter. In the case of the UK northern sector of the North Sea, most flights are centered on Aberdeen Airport, Europe's largest commercial heliport, serving around 500,000 helicopter passengers each year.

In the past survival suits used in the UK sector of the North Sea used to conform solely to the UK CAA Specification 19. The new suit doesn't just comply with the new European standard of EASA (European Aviation Safety Agency) it goes beyond the minimum requirements delivering exceptional in-water performance and survivability. The people wearing it as they fly back and forth to their installations need to know that it is as technological perfect as it can be.

"They want to feel that they have the best protection there is. But we also know what it is like to sit on a helicopter on a long flight with a survival suit: You have heat, noise, stress and all the rest of it... So we designed this new suit knowing that the people who wear it can feel confident that they are given the best possible protection whether it is been worn once or a hundred times. Our aim is to make their journey as comfortable as possible", says Andy Wilson.

"We have even taken the latest offshore sizing information and carried out surveys of offshore workers, listening to their concerns and reacting to their feedback. These suits are built to fit today's offshore work population." The outer shell of the suit is waterproof, breathable and inherently flame retardant. The thermal lining uses state-of-the-art Outlast<sup>®</sup> PCM technology for much better heat management. Outlast<sup>®</sup> technology was originally developed for NASA to protect astronauts from temperature fluctuations in space. In the Series 1000 suits it controls the microclimate inside the suit to absorb excess body heat from the wearer when it is hot. The Outlast<sup>®</sup> lining stores that heat, then releases it when the wearer gets cold. Moreover there is also a bonded antimicrobial layer of 99,9% silver to make sure the material remains fresher for longer. And a 3 mm thick layer which traps warm air and provides more insulation.

### Outlast<sup>®</sup> technology

Outlast<sup>®</sup> technology was originally developed for NASA to protect astronauts from temperature fluctuations in space. Outlast<sup>®</sup> phase-change materials (PCMs) absorb, store and release excess body heat. The principle of PCMs is simply demonstrated. Looking at PCMs two well-known technologies are successfully combined: On the one hand is the microencapsulation, as known from the chewing-gum inside which microcapsules are embedded. While chewing the shell is destroyed, and the taste is released. Another example: perfume probes in magazines. The microcapsules being destroyed while rubbing on the paper, as the smell is released.

The difference in Outlast<sup>®</sup> materials: Microcapsules are also used, but the shell is stable and doesn't get destroyed. The capsules are very tiny: Around 1,000 fit on the head of a pin (ca. 3 million per cm<sup>2</sup>). Inside the patented microcapsules, called Outlast<sup>®</sup> Thermocules™, substances similar to paraffin are stored, which are capable of phase change. This simple physical principle is well-known to everyone, example H<sub>2</sub>O: Water becomes ice or vapour when energy is added or taken away. PCM technology takes advantage of exactly this same law of physics. The advantages of Outlast<sup>®</sup> Adaptive Comfort<sup>®</sup> products on a glance:

- Absorbs excess body heat
- Manages moisture
- Reduces overheating
- Reduces chilling
- Reduces perspiration
- Continuously adapts to thermal changes
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Everybody's sensitivity to temperature changes is different, which means everyone sweats or becomes chilled at different rates; quickly or slowly. But the temperature corridor in which we feel comfortable

is relatively narrow: when the body core temperature of 37°C fluctuates only 2°C upwards or downwards we are subject to fever or hypothermia. Here Outlast® products help. They reduce temperature swings and influence the comfort zone efficiently. The microclimate is well balanced, one sweats less and is less chilled. You feel not too hot, not too cold, but just right®.

Outlast presents latest developments around phase change materials (PCM) at Techtextil from 24 to 26 May, 2011, in Frankfurt; Hall 3.1, Stand E 61.

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### Outlast

Outlast Technologies, Inc., a privately held U.S. corporation, is the worldwide leader in phase change materials and applications. Outlast® technology is the heat management technology originally developed for NASA that enables any textile to absorb, store and release heat. Outlast® technology proactively responds to changes in skin temperature to manage heat and reduce moisture for everyday comfort.

For over 20 years, Outlast has been committed to the development of new fibers, fabrics and coatings incorporating phase change materials, expanding the use of Outlast® technology across more than 200 brands and a multitude of products in apparel, footwear, bedding, packaging and labels, and accessories. For more information, please visit [www.outlast.com](http://www.outlast.com).

### Survival-One

Survival-One Limited is the world's leading provider of survival equipment contractor logistic support (CLS). Focused on serving the oil and gas industry, military, marine, aerospace and homeland security markets Survival-One can tailor support packages to exactly meet end user requirements. The company has over 35 years of experience in providing total logistic support to the oil and gas industry operating in the harsh North Sea, including the rental, servicing and repair of survival equipment. Survival-One was formed by the merger of Multifabs Survival Limited and Whirly Bird Services Limited.

Survival-One is part of the Survitec Group, the world's leading survival technology company, which includes the Multifabs, Beaufort, DSB, Eurovinil and RFD brands. For more information, please visit [www.survival-one.com](http://www.survival-one.com).

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Attachments: Picture survival suit by Survival-One, Outlast® artwork  
756 words

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Photo 1

Whilst helicopter transportation is safe, the potential for a helicopter accident over water can have serious consequences. A survival suit is designed to improve the wearer's survival in this life threatening environment. The new helicopter passenger survival suit "1000 Series" by Survival-One provides optimum performance and protection to the wearer. The climate regulating Outlast® lining offers excellent thermal comfort inside the suit.

Photo: Survival-One

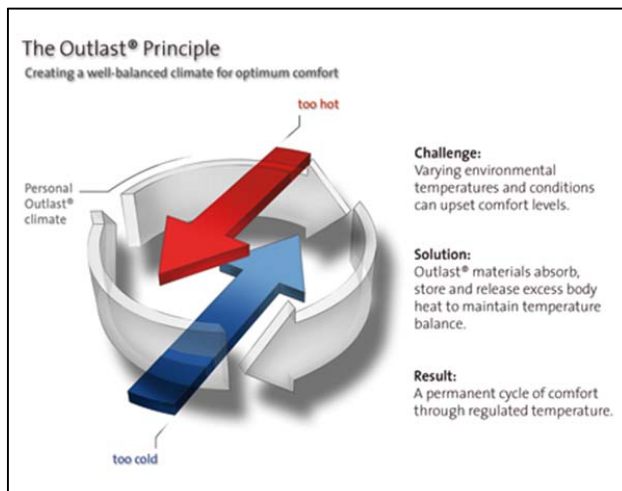


Photo 2

Outlast® technology was originally developed for NASA to protect astronauts from temperature fluctuations. Today Outlast® materials bring a dynamic heat management to many applications and balance the body temperature to improve thermal comfort.

Photo: Outlast