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Alufoil Trophy 2012: Drinking water on tap thanks to solar still

A remarkable survival product, which makes drinking water from almost anything containing moisture, has been awarded an Alufoil Trophy 2012 for Technical Innovation. The Survivastill solar still, which relies on alufoil as a major component, has been developed by Survivakit, with Protective Packaging providing the required manufacturing techniques, for the aid industry, military, outdoor pursuits and life raft sectors.

“The judges agreed this was a really innovative and potentially life-saving product which relies on alufoil to trap heat in order to distil drinking water from an amazing variety of sources. As a piece of innovation technology it is outstanding, while its potential uses are clearly of major benefit in many extreme or disaster situations,” explained head judge Antoinette Devine, global packaging consultant to SABMiller.

The still can produce up to 2 litres of drinking water per day from salt water, contaminated water, urine, wet soil or even vegetation such as moss, grass or leaves – in fact almost anything with moisture content.

It operates by trapping heat from the sun within an inflated chamber where the alufoil sheeting reflects the sun’s rays back into the chamber to increase the internal temperature of the distilling reservoir. The efficiency and output of the process is greatly improved by the sheeting.

Protective Packaging says the alufoil offers four essential properties to the success of the still: resistance to permeation or leakage; reflectivity for signalling location; radar reflectivity to assist location finders; and heat reflectivity (radiant heat from the sun) to create the right environment for water evaporation.

Even in extreme cold the Survivastill can be used as a personal protection sheet against the onset of hypothermia.

Simon Jolly, sales director at Protective Packaging stated, “Once again we are delighted to be awarded an Alufoil Trophy for Technical Innovation, along with Survivakit. The Survivastill project was an unusual and challenging development which confirms our ability to constantly manufacture new and innovative applications and support our clients manufacturing requirements.”

The Survivastill derives its reflective, thermal, and protective properties from a combination of materials and a strong laminate construction. Comprising of 4 layers of different materials and bonded together, these provide a flexible structure with the properties to support the requirements of the solar still.

- Layer 1 – Polyester gives the barrier foil mechanical strength at a wide range of temperatures and also waterproofs the material.
- Layer 2 – The key factor – a 7-15 micron layer of aluminium foil which is the barrier against water vapour transmission, oxygen transmission and biological damage.
- Layer 3 – a layer of Nylon is used for tensile strength and puncture resistance
- Layer 4 – An additional layer of polythene enables the laminates to be heat sealed.

The Alufoil Trophy is organised by the European Aluminium Foil Association. There are five categories – Consumer Convenience, Marketing + Design, Product Preservation, Resource Efficiency and Technical Innovation. Judges also award Overall Excellence. For 2012 there were 13 winners from 52 entries.

High resolution pictures can be downloaded and all winning entries can be viewed at www.alufoil.org

Further information:

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