

Wool and Corrugated Packaging Combination Creates a Guardian Angel for Life-Saving Drugs



Corrugated has enabled an environmentally-friendly material to make the successful transition from protecting food to insulated packaging for life-saving vaccines as part of an innovative solution developed for the pharmaceutical cold chain distribution sector.

The Life Guardian box for pharmaceuticals is an adaptation of the Woolcool solution for transporting temperature sensitive food products such as meat – and is a felted, recycled wool liner alternative to the conventional expanded polystyrene (EPS) and polyethylene (PE) foam transit boxes that had dominated the chilled food sector.

Life Guardian's outer box is made from a water-resistant coated, dual-wall microflute corrugated construction with a thickness of just 3mm. Loose corrugated stabiliser inserts sit between the payload and icepacks to regulate temperature fluctuations once the case has been filled.



Logistics and handling benefits include a weight reduction in icepacks of nearly 50% compared to a similar-sized EPS case and a pallet-load capability of 80 full packs and fitments; over four times as much as the EPS format.

Structural packaging specialist Angela Morris, who pioneered the wool lining insulated transit packaging for chilled meat and then extended it to pharmaceuticals to redress an estimated £1 billion waste problem attributed to fluctuating temperatures while goods are on the move, said corrugated was the ideal partner as it could withstand the rigours of the supply chain.

She added: "Hitherto, the global pharmaceutical industry has struggled to deliver all desperately needed vaccines safely each year due to inadequate transit packaging. It now has a viable and more sustainable option that will help to reverse the unnecessary waste of money and save lives in the process."

The Confederation of Paper Industries' (CPI) Director of Packaging Affairs, Andy Barnetson, believes corrugated stepped up to the plate to help create an innovative transit packaging solution for pharmaceuticals that not only ticks all the environmental boxes but also provides a more efficient and effective alternative to longer established competition.

He said: "The onus was on corrugated in managing the technology's transition from the food to the pharmaceutical sector. This is exemplified by the remarkable robustness of the micro-flute outer barrier that can fulfil extreme logistical requirements under what are the most testing conditions."

Capable of customisation to match individual requirements, Life Guardian maintains internal pack temperatures between 2°C and 8°C for up to 150 hours while exposed to extreme ambient weather conditions, offering a more thermal resistant material (0.029w/mK) compared to EPS (generally around 0.036w/mK).

This innovative solution for pharmaceuticals demonstrates the UK Corrugated Industry's qualities as a facilitator of efficient transportation and distribution, with the versatility to adapt to different conditions. There might be higher material costs by using a combination of wool and corrugated but this is mitigated by savings in transport efficiency and reduced ice.

The advantages of corrugated – a supply chain with flexibility, increased speed and more efficient packaging – are stacking up, enabling it to effectively challenge traditional packaging methods for transporting pharmaceutical products across the globe.

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For additional information, please contact Emma Punchard, Director of Communications, tel: 01793 889609, email epunchard@paper.org.uk.

NOTES TO EDITORS

- The Confederation of Paper Industries (CPI) is the leading trade association representing the UK's Paper-based Industries, comprising recovered paper merchants, paper and board manufacturers and converters, corrugated packaging producers, and makers of soft tissue papers.
- CPI represents an industry with an aggregate annual turnover of £6.5 billion, 25,000 direct and more than 100,000 indirect employees.
- For facts on the UK's Paper-based Industries please visit: www.paper.org.uk.