# The Greener Side of Pharma Logistics

*IPI Speaks with Dr. Florian Seidenburg on the Ecological impact in Pharmaceutical Supply Chain*

**Q. From the outset, it was clear that ECOCOOL was revered for its innovative packaging and insulation concepts, having been awarded the Bremerhavener Gründerpreis (Bremerhaven Founder's prize) in 1999, a remarkable feat considering it was founded by economics graduate Heinrich Siedenburg and engineering graduate Ulf C. Abbes in the same year. Can you tell IPI more about how the Bremerhaven prize supported the founders with the implementation of their promising business ideas in the cooling packaging and packaging components sphere?**

The Bremerhaven Founder's prize gave the then infant start-up the necessary financial backing to pay for costly development outlays and get through the first difficult years. Considering that it mainly consisted of €100.000 funding, it enabled ECOCOOL to grow without any VC or other external financial backers.

**Q. With an increasing customer demand for reliable service, flexibility and short delivery times in the pharmaceutical, transport, and logistics industries, cooling packaging companies can struggle to keep up with the influx of consumers who require personalised packaging solutions. How does ECOCOOL's production facilities ensure that they are always prepared to respond to the specific needs of their customers?**

We take pride in stating that all our products are 100% made in Germany in our Bremerhaven-based factory. Even though most of our processes are quite labour-intensive, we feel that being close to our customers in central Europe is the key to being able to live up to their demanding schedules. We are also building very close relationships with our customers, which helps us to understand their requirements and their needs. That being said, we do serve global customers and ship worldwide.

**Q. One of your main products is thermal blankets. Can you tell us a little bit more about your products, what they achieve and why your products stand out in a saturated market?**

Indeed, thermal blankets are one of our main product ranges. In the pharmaceutical supply chain, they are mainly used to protect the sensitive loads during transport interfaces, especially during the dreaded "tarmac-time" in air-freight. We offer four different ranges (ECO-LIGHT, ECO-SAFE, ECO-SAFE+ and ECO-SAFE++). While all four solutions offer a reflective outer surface, they differ in terms of thermal protection. In particular, I would like to point out the ECO-SAFE+ model, which uniquely combines a thermal blanket with thermal mass through our WaterBlankets. These long sleeves filled with water-based gel add a significant amount of thermal mass to the outside of the sensitive and mostly

lightweight products. This way, the thermal protection can be drastically improved and temperature excursions further minimised in an extremely cost-effective way. The efficacy of this solution has been confirmed by content customers over and over again.

**Q. The EU directive 'Good Distribution Practice (GDP) states that pharmaceutical products such as medicines need to be transported 'according to storage conditions', in order to not only ensure that there is more security in the drug distribution chain but to also make the pharmaceutical transport chain safer too. As wholesale distributors must legally obtain a wholesale distribution authorisation, can you tell us more about how products such as your Pharmboxes (2–8 °C) are GDP compliant?**

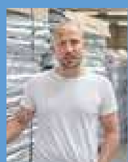
Technically, temp-chain packaging cannot be GDP compliant. They are a tool to make the distribution process of our customers GDP compliant, by helping to eliminate temperature excursions. Another requirement for cool-chain shipper boxes is (pre-)qualification. A qualification of a shipper box consists of four steps (DQ, IQ, OQ, PQ) which all technical equipment in the pharmaceutical supply chain must be subject to. In the case of insulated subjeted boxes, the most important part of this qualification process is the OQ and PQ steps. OQ stands are operational qualification and basically consists of several tests of the thermal performance of the box in a controlled, lab environment. Having demonstrated in this step that the box can maintain the required temperature range over the desired runtime, the customer needs to perform the so-called performance qualification. This qualification step consists of various shipments during throughout the year in order to assess if the lab results carry over to the real world. If the preceding OQ has been designed with demanding temperature profiles, the PQ usually shows no unwanted surprises.

**Q. Ecological considerations are becoming more and more important as many pharmaceutical customers are looking for ways to reduce their ecological footprint. How does ECOCOOL cope with this challenge?**

We believe that cool chain solutions must become greener in the future. Therefore, we are going to launch a 100% biodegradable 2°–8°C shipper box, entirely made from recycled paper and pulp. This solution drastically reduces the use of plastics and can be recycled via the paper stream, hence reducing the environmental impact of cool chain packaging dramatically. A first prototype will be on display during the IQPC Cool Chain Europe Event in Düsseldorf.

**Q. The pharmaceutical packaging industry has come a long way since the 19th century, with modern technology shaping pharmaceutical logistics through computer-based solutions. Can you tell IPI what role AI and AR have to play in the smart packaging of pharmaceuticals.**

As we are also a distributor of temperature data loggers, we need to keep a very keen eye on those developments. There has been a surge of new and fascinating solutions in this area with exciting possibilities for the users, such as real-time temperature monitoring, real-time geo localisation or highly automated processes through Bluetooth or near field connectivity. We offer a wide range of temperature data loggers and individually help customers to find the correct device for their needs.



## Dr. Florian Siedenburg

Dr. Florian Siedenburg is the general manager of ECOCOOL GmbH, located in Bremerhaven, Germany. Dr. Florian Siedenburg graduated in 2006 in Economics and obtained his doctoral degree in Econometrics in 2010. He entered the family-owned business in 2013. ECOCOOL GmbH was founded in 1999. ECOCOOL specialises in the development and distribution of insulating packaging. As of today, thermal blankets and other passive packaging for pharmaceutical air-freight constitute the core business of ECOCOOL.