

Less is more: Packaging innovation reduces DELO's carbon footprint and improves processes

Our long-term partnership with DELO has helped streamline its supply chain with packaging and transport efficiencies resulting in significant process, cost and environmental improvements.

DELO holds the world record for achieving the heaviest lift using adhesive – 17.5 tons with three grams¹. Most of the company's high-tech bonding solutions are used in tiny amounts in electronics applications. For example, with just one liter of adhesive, 40 million radio frequency identification (RFID) labels can be produced. At the core of DELO's DNA, lies the inherent desire to deliver results with simplicity and the least amount of overhead necessary.

Scenario: Logistics improvements required

DELO wanted to improve existing processes to store and transport industrial high-value, deep-frozen adhesives, from a manufacturing site in Germany to locations across Asia including Shanghai, Seoul and Singapore.

With a previous logistics provider, these shipments were executed in single-use Styrofoam boxes with dry ice. This approach required extensive warehouse space for packaging storage and time for shipment preparation as well as special safety regulations for the dry ice (frozen CO₂). This time consuming and non-eco-friendly approach was not aligned with DELO's goal of making a long-term positive contribution to a more sustainable environment.

Solution: Packaging innovation

World Courier presented DELO with Cocoon², a multi-use, reusable passive packaging solution for pallet-sized shipments as an alternative to the existing approach.

With storage facilities in Europe and Asia, as well as a global logistics network already in place, the decision for DELO to switch to World Courier was simplified by our ability to supply proprietary thermal containers alongside transport solutions.

Our engineers created Cocoon to solve our customers' most difficult challenges – transporting pallet size shipments at frozen temperatures while maintaining stability autonomously for up to one week.

The all-in-one passive solution is stress-tested for extreme thermal performance and removes the need to charge, inspect or refill the unit for up to 13 days³.





Environmental impact

As part of AmerisourceBergen, we are united in our responsibility to create healthier futures. We integrate environmental and social considerations into every business decision we make, collaborate with our partners to fulfill collective commitments to sustainability and foster the well-being of our communities and team members.

Our partnership with DELO has delivered significant savings and benefits by eliminating:



233,440 kg in cargo weight (mainly by eliminating dry ice) which is more than the empty weight of a Boeing 747-8⁴



8,345 polystyrene dry ice boxes, which is equivalent to an area of 18 tennis courts⁴



Approximately **3,000 metric tons of CO₂** in shipping emissions; equivalent to avoiding emissions from over 11 million kilometers driven by an average passenger vehicle, including CO₂ savings in dry ice⁴



Up to **60% of a working day** in time savings achieved in the pick and pack process⁴

The outcome: Carbon reduction, process improvements and cost saving

DELO audited our facilities and we scaled our Munich branch capacity to meet the volume requirements. We worked together on a limited number of shipments, and transported frozen, high-value adhesives using Cocoon at -15°C to -25°C. Given the initial success, the service was expanded and World Courier now manages the majority of DELO's transport requirements with no temperature excursions to date.

The logistics solution designed for DELO achieved:

- Smaller warehousing requirements – Cocoon is far more space-efficient than boxes and dry ice
- Reduced packaging preparation and fulfilment time
- A temperature range optimal for the product
- Reduced waste from packaging due to reusability
- Reduced carbon emissions in shipping due to the space efficiency of Cocoon technology

This also contributed to improved health and safety throughout the supply chain as dry ice, a hazardous substance, was fully eliminated.

For greater end-to-end visibility and sustainability during the transportation of your high-value products, contact us to learn more about our solutions.

Sources

¹ www.guinnessworldrecords.com/news/2019/7/super-strong-glue-holds-17-tonne-truck-in-the-air-for-onehour-584909

² www.worldcourier.com/expertise-temperature-control-solutions/cocoon

³ Based on World Courier data from real shipments.

⁴ From Jan 2018 to November 2020 inclusive. Calculated using: World Courier & DELO proprietary data www.shipco.com/webapps/emm-calc/emissioncalculator.html