

Packaging innovation reduces DELO's carbon footprint and creates process improvements

At World Courier, we've established a long term partnership with DELO, a pioneer in developing industrial adhesives and bonding technologies for high tech markets. We worked with DELO to streamline their 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 tonnes with three grams of adhesive¹. Most of their high-tech adhesives are used in tiny amounts in electronics applications. For example, with just one litre of adhesive, 40 million 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 ships products from their manufacturing site in Windach, Germany to locations across Asia including Shanghai, Seoul and Singapore. Some of DELO's product need to be stored and shipped deep-frozen. With a previous logistics provider, these shipments were executed in single-use Styrofoam boxes with dry ice. This approach re-quired extensive warehouse space for packaging storage and time for shipment preparation as well as special safety regulations for the dry ice (frozen CO₂).



Carbon reduction, process improvements and cost saving

The outcome: carbon reduction, process improvements and cost saving

The logistics solution designed for DELO has achieved:

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

From Jan 2018 to November 2020 inclusive, this represents a saving of*:



233,440 kg in cargo weight (mainly by eliminating dry ice) which is more than the empty weight of Boeing 747-8



8,345 polystyrene dry ice boxes, which is equivalent to an area of 3,496m² or 18 tennis courts



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



Up to **60% of a working day** (man hours) in time savings achieved in the pick and pack process

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

Solution: Packaging Innovation

World Courier presented DELO with Cocoon, a multi-use, reusable passive packaging solution for pallet-sized shipments as an alternative to single-use Styrofoam boxes. DELO audited our facilities and we scaled our Munich branch capacity to meet their volume requirements.

We started working together on a limited number of shipments, transporting their industrial high value adhesives frozen with Cocoon at -15°C to -25°C. Given the initial success, this was extended and World Courier now manages the majority of DELO's transport requirements with no temperature excursions to date.

Summary

We understand the importance of developing sustainable specialty supply chains in partnership with our customers. While sustainability initiatives are often identified as engineered and executed for environmental benefit and creating a better planet for future generations, there's more. Environmental efforts also often have the advantage of value creation due to increased efficiencies and reduced energy costs.

Sources:

[1] <https://www.guinnessworldrecords.com/news/2019/7/super-strong-glue-holds-17-tonne-truck-in-the-air-for-one-hour-584909>

[2] Calculated using:
World Courier proprietary data
DELO proprietary data
<https://www.shipco.com/webapps/emm-calc/emissioncalculator.html>

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