



PACKAGING



Sustainable Tea Carton Packaging

Improved carton sealing solution at Lipton

Lipton Manufacturing Poland sp. z.o.o.



Lipton Manufacturing Poland sp. z.o.o. replaces plastic wrap on tea cartons with a sustainable adhesive dispensing solution from Nordson

Lipton Manufacturing Poland is the largest tea brand with a strong presence in the European market. The company offers a wide range of products based on natural ingredients and sustainable production. The product portfolio includes black tea, green tea, and herbal tea, as well as tea bags, loose tea, and ready-to-drink tea beverages. PG Tips, Lipton, Saga, Pukka are among the company's well-known brands. Since 1996 Lipton manufactures its tea in Katowice, Poland, to strengthen its market position and consolidate European manufacturing operations.

The Challenge

In the past, one of the traditional ways of packaging tea was to wrap the boxes in plastic wrap. It provides a barrier to moisture, light, and air, helping to preserve the quality and freshness of the tea. Lipton used plastic wrap to safeguard the tea boxes from potential damage and tampering during transportation. But there are significant disadvantages of it: the plastic wrap is not biodegradable material, and this approach resulted in substantial waste, causing recycling challenges.

Lipton is committed to delivering exceptional quality and taste in its teas and prioritizing environmental and community concerns. This led Lipton to look for a solution to minimize the waste and energy associated with boxing its products. The company decided to take a significant step towards sustainability and minimize its environmental footprint with the strategic transition from plastic wrap to an adhesive dispensing solution for secure carton sealing.

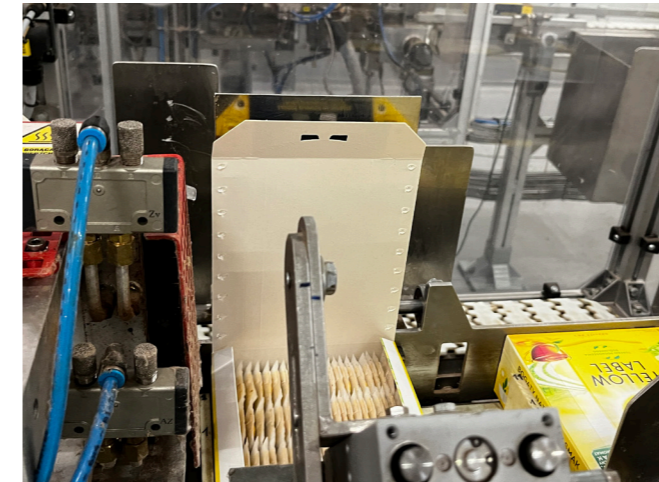
Rafał Rumin, Continuous Improvement Designer at Lipton in Poland, has seen great advantages for an adhesive sealing solution: "We have seen the great benefit of gluing the flaps for the box closure. In addition to the fact that this solution includes the barrier against moisture, we have set new requirements for the new system to fulfill". The new requirements include:

- User-friendly system
- Fast and clean cut-off
- PLC Communication (remote operation)
- Local aftermarket support
- Less adhesive consumption for saving material
- Fast warm up system adapted to current production needs
- Reduced material degradation – such as curing, charring
- Automatic adhesive fill system



The Nordson Solution

Lipton decided to replace the plastic wrap on the tea boxes with a hot melt adhesive dispensing system from Nordson. This solution meets all of Lipton's new requirements.



Ensuring the precise sealing of the top cardboard flap with adhesive is crucial.

Lipton already knows Nordson from other applications and appreciates Nordson's extensive expertise with hot melt solutions. "In 2021, we modernized the first line as a test. The goal was to achieve 100% efficiency using adhesive instead of plastic wrap while maintaining high standards of cleanliness. This initiative strongly aligns with ecological values, striving for plastic waste reduction. The project included the modernization of 14 production lines, taking into account the diversity of 11 types of tea boxes of various sizes from 20-bag up to 100-bag version," explains Robert Milej, Project Manager of Lipton Manufacturing Poland sp. z o.o.

In total Lipton manufactures two million tea cartons daily. The company decided to upgrade the existing production lines and ultimately installed Nordson hot melt systems for all 14 lines, including:

- ProBlue® Flex Melter with Melt-On-Demand system that features a fast warm-up of adhesive at a consistent temperature. The melter includes an automatic filling system which provides a safe operating system, by limiting contact with the hot glue tank.
- MiniBlue® II SureBead hot melt applicators were integrated for a precise adhesive application on the tea cartons. With an automated pattern control, the system adjusts material amount and positioning to match box size and shape, ensuring ease of operation and minimal maintenance requirements. The MiniBlue II SureBead applicators feature lightweight, compact designs for easy installation and replacement. Equipped with SureBead® technology, these applicators prevent nozzle clogging and maintain consistent bonding quality. "Lipton's move from plastic wrap packaging to adhesive-sealed cartons marked a huge transition with a strong emphasis on the reliability and speed of MiniBlue® II SureBead® applicator. Ensuring the precise sealing of the top flap on the carton with adhesive was crucial to maintain", says Grzegorz Lenarcik, Area Sales Manager in Nordson Poland.

- Nordson PureFlow hoses are specifically engineered to reduce adhesive degradation and contamination risks. The hoses feature a unique design and ensure longevity and reliability even under high temperatures and pressures. This feature fulfilled Lipton's requirement of reduced adhesive degradation and associated downtime.

Using Nordson systems enabled Lipton to meet all production demands, resulting in the following benefits:

- Zero plastic waste, which strengthens the company's ecological values and increases customer satisfaction.
- Increased efficiency and reliability in the packaging process, resulting in improved product quality and safety.
- Reduction of production losses due to degradation and contamination of the glue, thus improving the quality and durability of the tea packaging

Replacing plastic wrap with adhesive has increased production efficiency and achieved a positive, sustainable change. This initiative underscores the company's commitment to maintaining its leadership in tea production while actively contributing to environmental protection.



Voice of Customer

"For the selected lines in this project, our goal is 100% achieved and we have managed to eliminate over 270 tons of foil from our tea boxes yearly from the start of the project in 2020," summarizes Robert Milej. "In the near future we intend to rebuild further packaging lines by using glue instead of plastic wrap."



The collaboration between Lipton Manufacturing Poland and Nordson to modernize tea packaging is a remarkable example of innovative environmental improvement in the food and beverage industry.



PACKAGING

Nordson application and verification technology helps efficiently apply adhesives to meet both form and function for a wide variety of packaging applications: sealing, attachment, confectionary and small pack, tray making, palletizing, siftproof/tamper evident/braille applications and labeling.

Packaging applications are often judged equally by how they look and how well they perform, so application systems must apply the right amount of adhesive to be structurally sound and without messy stringing, tailing or squeeze out. Whether using hot melt or cold adhesives, Nordson is a world leader in packaging and converting application technology.



© 2024 Nordson Corporation | All Rights Reserved | PKR-24-07 • 07/2024

Why Nordson



Global

Supporting and collaborating with customers worldwide.



Business Scale

Extensive capabilities to deliver on customer promises.



Value Innovation

Consistently creating customer value with innovative technology



Direct

Direct offices in over 30 countries with local application experts nearby to help.

 /company/nordson-adhesive

 @NordsonAdhesiveSystems

Nordson Adhesive Dispensing Systems | www.nordson.com/packaging

