

Case Study: Massey Feeds replace stretch film with “Lock n’ Pop” stabilisation adhesive.



Massey brothers is a family owned manufacturer of a wide variety of animal feeds and agricultural products with 125 years experience in the animal feeds business. The company operates from two manufacturing sites located at Preston in Lancashire and Holmes Chapel in Cheshire. Additionally, the company sells its products through three company owned cash & carry outlets located at Longor and the two manufacturing sites in Preston and Holmes Chapel.

The company manufactures around 27,000 tonnes of bagged feeds a year and the business is experiencing steady growth in demand for it's products.

The company has been quick to adopt new technologies and processes in order to increase it's performance and has completely removed the need to stretch wrap outbound products by switching to use “Lock n’ Pop” stabilisation adhesives to stabilise palletised loads.

What was the issue?

- The main aim was to remove the process step of stretch wrapping palletised loads which was increasing the loading time for distribution vehicles
- The company was also seeking ways to reduce packaging spend without compromising product quality

What the company did

Animal feeds are sold in various pack formats but mainly in plastic sacks weighing 25 kg. Palletised loads weigh 1 tonne. A semi-automated wrapping machine was used and palletised loads had to be physically moved from the end of the production lines in each plant to the wrapping area prior to wrapping. The wrapping operation utilised 25 micron stretch film which was applied to the load in 12 wraps around the standard pallet.

The company considered alternative wrapping methods and materials before deciding to trial water based stabilisation adhesives. Following successful trials the company adopted this method of stabilising it's products. The only capital requirement of the change was installing the required spray equipment in-line at the point of palletising the load.

The spray installation did not take up much space and as the adhesive is applied cold there is a minimal energy cost to operate the spray applicator.

Once the water based adhesive is applied it quickly dries securing the sacks in place. The high shear strength of such adhesives holds the sacks in place during distribution but easily releases packs when picked from the load.



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What was achieved?

Since switching from stretch wrapping of loads to using 'Lock n' Pop' stabilisation adhesives the company has achieved it's primary objective of streamlining the palletisation process by cutting out the need to stretch wrap it's loads. This has reduced overall production time by 5 minutes per tonne.

The most impressive achievement has been the near total removal of stretch film from the operation. If stretch film was still used today the volume of film used would be:
 $27,000 \text{ pallets} \times 12 \text{ wraps} \times 4.4 \text{ metres} = 1,425,600 \text{ metres}$, 25 micron film weighs approximately 12g per metre so the weight of film saved is=17.1 tonnes per annum

The benefits of switching can be summarised as:

Estimated film saving of 17.1 tonnes a year

Estimated Saving of 1011 cores weighing 1.2Kg each = 1.2 tonnes of cardboard

Carbon emission reduction of 34.2 tonnes p.a.

Adhesive gives a significant saving against film

Reduction in manufacturing time

Pallet stability maintained

Increased convenience for customers who do not have to dispose of waste film.



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