

Sustainable Management Forum

- Innovative packaging and transport solutions in the food, pharmaceutical and cosmetics industry

Cartonplast plastic layer pads as the “green” interface between container manufacturers and fillers

Plastic layer pads (PLPs) are replacing cardboard intermediate layers for the transportation of glass, can and PET containers

More than 130 container industry production locations in 20 countries are utilising Cartonplast PLPs for the transportation of glass, can and PET containers to filling plants. As the largest European reusable Pool System operator for recyclable PLPs on a rental basis, the Cartonplast Group (CPL) has a closely-interconnected Service Centre network at its disposal. The pioneer of the “green” business model has more than 30 years’ experience in the delivery and return, sorting and cleaning as well as the management of reusable transport products. With 7,000 participating filler end customers in the beverage, food, pharmaceutical and cosmetics industry in 30 different countries, the environmentally-friendly closed-loop pooling concept is considered one of the most successful outsourcing systems within Europe. Currently, 45 million PLPs are in use with over 130 million cycles managed in 14 CPL Service Centres across the world.

Within the system or individually tailored

Our customers do not just utilise the holistic CPL services – our company also offers individual solutions: for example, on-site storage management of the PLPs including mobile cleaning at the respective container manufacturer – integrated into the localised situation.

Cartonplast “Best Practice” examples worth emulating

Environmentally-friendly - reusable - recyclable – economically viable - reliable – plannable

These two examples of practical applications should serve to stimulate other companies seeking efficient solutions for similar transportation and production problems. The examples show: PLPs are a worthy replacement for cardboard intermediate layers. All the operating processes thus changed sustainably increase efficiency, lower the costs and yet retain high quality standards.

1. The CPL model for success

The “*Move to plastic*” project at [Halewood International](#), the largest independent manufacturer of beverages in Great Britain, was a collaborative initiative with the glass suppliers. The aim in this particular case was to reduce waste at the location, and in return to increase the number of recyclable items. 80% of the container glass products are now transported on PLPs – cardboard intermediate layers are now only used in certain individual cases. The PLPs for the transportation of the glass products to the beverage manufacturer are provided, fetched and then reprocessed by CPL-UK. In this way, Halewood can focus on the manufacture and delivery of its high-quality beverage products. Major changes have also resulted in the operating processes. Due to the reduced use of cardboard intermediate layers, savings have been achieved regarding both time and personnel, who were usually deployed for sorting of the cardboard waste material. The sorting and recycling of damaged PLPs is now organised through CPL-UK, and Halewood does not incur any disposal costs.

Julian Galsworthy, Vendor Scheduling Manager at Halewood International, based in the United Kingdom, confirms the efficiency of the system:

“Our production processes have been optimised, as the depalletisation of the glass containers has become easier and faster. In particular, wet and damaged cardboard intermediate layers were causing problems

*Sources

- Comparative lifecycle assessment of polypropylene and cardboard intermediate layers for transportation purposes
- Cartonplast Group Sustainability Report
- CO² formula by Cartonplast

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during the depalletisation of the glass containers, and we were suffering production losses. PLPs do not suffer deformations – in contrast to cardboard – and the depalletisation of the glass containers now runs smoothly”.



The production systems belonging to the beverage producer Halewood International

2. The CPL model for success

[JACOBS DOUWE EGBERTS](#) (JDE), one of the largest instant coffee manufacturers in Great Britain, was having problems with the weight of the glasses on their cardboard intermediate layers – and also the depalletisation process wasn't running smoothly. The glass containers are too heavy to be palletised stably on cardboard intermediate layers. This was a major quality and safety issue. The costs of more sturdy cardboard intermediate layers of the same thickness as PLPs would have been uneconomical – and their vulnerability to damp was also a problem. The company therefore replaced the cardboard intermediate layers with PLPs for the transportation of the glass containers. The surface quality of the PLPs now permits a rapid and reliable depalletisation process and reduced production failure times. Due to the improved strength and durability of the PLPs, the palletisation options for the glass containers have also expanded – more weight can now be packed onto each pallet. In this way, the number of pallets required for transportation has been reduced, and therefore also the transport volume. JDE no longer has to invest in new transport products, as the stability of the PLPs guarantees their reutilisation – in contrast to cardboard.

As James Dockree, Packaging Quality Specialist at JDE in the United Kingdom, explains: “Cardboard intermediate layers do not work efficiently on our palletisers in comparison to the PLPs. Every time glass falls off the pallets, we have a major quality and safety issue”.



The production systems in the plant belonging to the instant coffee manufacturer JACOBS DOUWE EGBERTS

“Green” transport products reduce CO² emissions

Transport layer pads made from polypropylene in an environmental comparison

In order to answer the market's questions regarding the environmental compatibility of a transport layer pad made of polypropylene in comparison to a cardboard intermediate layer, CPL has published a comparative

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product ecological assessment on PP layer pads and cardboard intermediate layers in June 2015. In this study, the “durability” of the PP layer pads was identified as the most important cause variable for the reduction of influences on the environment. The CO² emissions over the entire lifecycle of a PP layer pad are 67% lower than for the corrugated cardboard intermediate layer also examined as an alternative means of transport. CO² has advanced to become a central factor for purchase decisions, as many companies are currently attempting to reduce their CO² emissions

Outsourcing sustainably lowers costs

Due to the CPL Pool System, customers profit from the economic advantages of the PLP rental concept. No company stocks of transport and packaging materials have to be maintained, and storage areas are cleared. All pallets with PLPs circulate in the external CPL Pool System. The cost structures remain transparent and the overall costs are reduced, as only service and rental fees are incurred for the number of PLPs actually used – without subsequent costs. In addition, there are no disposal costs for the recycling of damaged PLPs. The economic viability of the CPL PLPs are also explainable through their long lifecycle. Summary: service and rental fees save costs – there are no replacement and financing costs – unproductively-bound capital is released for investments into the core business of the CPL customers.

Sustainability through recycling

Transport layer pads made from recycled polypropylene

Layer pads (LPs) for the CPL reusable transport system are produced from the recycling plastic “polypropylene” (PP). This material is characterised by its robust quality and durability – one individual PP LP is theoretically infinitely reusable as long as it is not damaged or lost. The PP LPs are therefore sustainable in the truest sense of the word. The use of PP LP “waste” for the production of new PP LPs reduces greenhouse gas emissions, and PP LPs made from PP recycled material are of the same high quality as those made from new PP material. Only the PP LPs sorted by CPL (e.g. broken LPs) are used to make the regranulate – which also guarantees the tracking of the materials.

Summary

The reutilisation of means of transport is more economic and ecological than simply throwing items away. This is one advantage of the CPL PLPs for transportation in the container industry, and at the same time a decisive competition factor in the market. “Our reusable transport products provide real added value for our customers and support them in addressing the changing conditions in the market and in the environment. This doesn’t just save costs and is good for the ecosystem – it has long-term benefits for both parties. Through the partnership collaboration, we are able to develop new applications which efficiently and successfully shape operating processes”, emphasises Michael Heikenfeld, Managing Director & CSO, Cartonplast Group. The influence of reusable transport products is increasing, and economically-sustainable business models are required. The terms economic viability and sustainability have long ceased to contradict each other. Cartonplast is striving on a long-term basis to expand the range of influence of its reusable transport products, as the CPL Pool System has gained international acceptance.

For further information, please contact us via email via info@cartonplast.com, or contact Michael Heikenfeld, Chief Sales Officer, michael.heikenfeld@cartonplast.com.

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You can obtain comprehensive information on the entire spectrum of services by CPL in the new CPL video clip on <https://www.youtube.com/watch?v=5WHac85Fzco>.

About the Cartonplast Group

CPL was founded in 1985, and its Headquarters is based in Dietzenbach, Germany. The PLPs by CPL are utilised at more than 130 production locations in 20 countries for the transportation of glass, cans and PET containers to filling plants. As the largest European Pool System operator of reusable PLPs on a rental basis, CPL has a closely-linked network of Service Centres. As the pioneers of a “green” business model, CPL has more than 30 years’ experience in the delivery and collection, sorting and cleaning as well as in the management of reusable transport products. This environmentally-friendly closed-loop pooling concept is one of the most successful outsourcing systems in Europe, with 7,000 participating fillers in the beverage, food, pharmaceutical and cosmetic industries in 30 countries. 45 million PLPs, currently in operation with more than 130 million cycles per year, are managed worldwide in 14 CPL Service Centres.

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