

Prevent & Save

Alpack Ltd. Packaging Optimisation Survey

Final Report
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Packaging Technologist,
Repak Ltd.
5th November 2009



www.preventandsave.ie





Executive Summary

Alpack Ltd. has an excellent packaging optimisation programme and actively seeks out methods of keeping packaging waste to a minimum. However, they are restricted in progressing further with some packaging waste reduction initiatives for a number of reasons that are discussed in the report. Briefly, these are:

- Design scope limited by the purchase of 'off-the-shelf' products and packaging
- Use of agents for the purchase of 'off-the-shelf' products and packaging
- Use of distribution depots for supply of products to customers

While packaging systems in general are excellent at Alpack Ltd., there are some areas where packaging waste may be further reduced. The following is a summary of the observations from the Repak Packaging Optimisation survey. All observations come from the survey carried out at the Dublin site. Each of the observations listed is discussed in further detail in the main body of the report.

- Packaging policies and specifications

These can be used to indicate preferred packaging specifications to customers and suppliers.

- Bulk supply of Twist-Off caps and closures

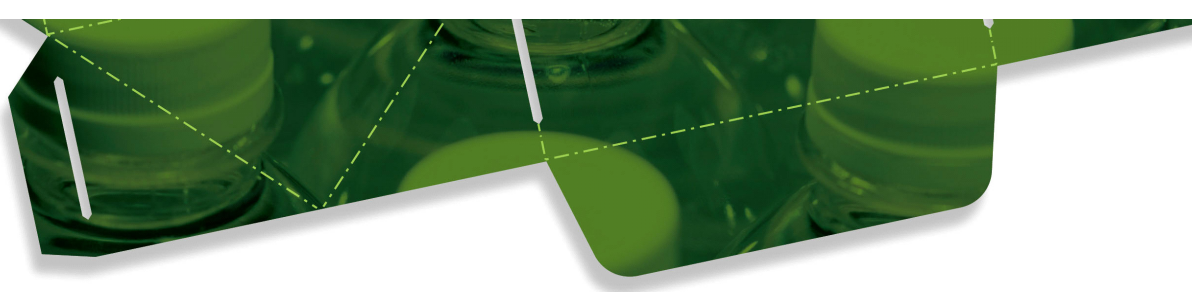
This may save on material and labour for orders in pallet quantities or above.

- Re-usable corrugated plastic layer pads

As well as storing plastic layer pads collected on-site, there may also be an opportunity to collect these layer pads from customers and return them to the original supplier.

- Computerised palletisation software

This software can be very effective in optimising pallet quantities and can be tailored to suit different company types. The software is discussed in more detail in the main report.



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Reasons why further reduction measures are restricted at Alpack Ltd:

- 4.1.1 Design scope limited by the purchase of off-the-shelf products and packaging
- 4.1.2 Use of agents for the purchase of off-the-shelf products and packaging
- 4.1.3 Use of distribution depots for the supply of products to customers

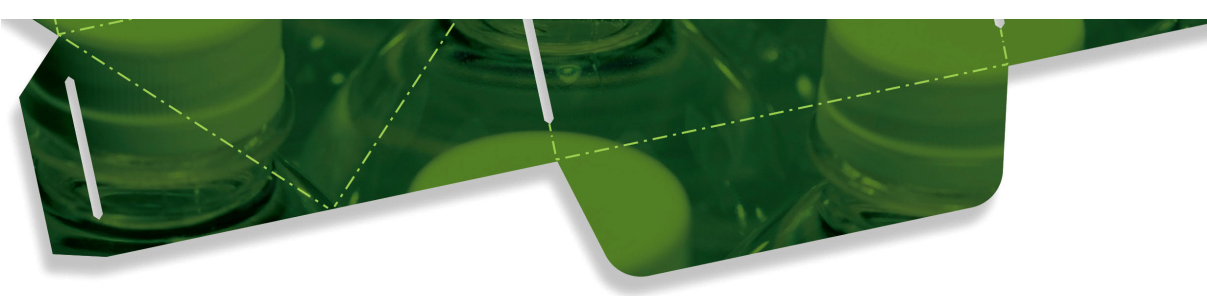
Repak's recommendations for the packaging systems at Alpack Ltd:

- 4.2.1 Packaging policies and specifications.
- 4.2.2 Bulk supply of Twist-Off caps and closures
- 4.2.3 Re-usable corrugated plastic layer pads
- 4.2.4 Computerised palletisation software

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1. Introduction

1.1 Company Details

Company visit conducted on: 21/10/09

Location:

Alpack Ltd.
Unit 1B,
Three Rock Road,
Sandyford Industrial Estate,
Dublin 18,
Ireland.

Present during visit:

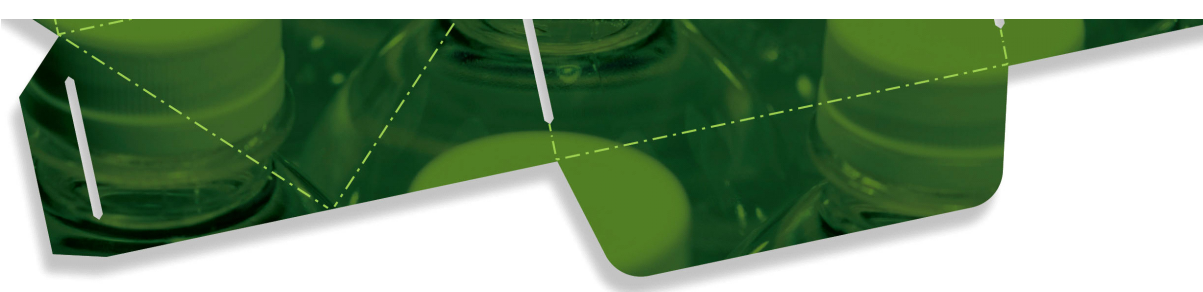
Liam Moore,	Alpack Ltd.
Colm Munnely,	Repak Ltd.

Alpack Ltd. contact details:

Liam Moore,	
01 295 7137	(Office)
liam@alpack.ie	(e-mail)

Membership Number: 3973

Repak Reference Number: R0043



1.2 Objective of Packaging Optimisation Survey

The objective of this Repak survey is to identify areas in Alpack Ltd.'s operations where primary, secondary and tertiary packaging may be optimised and packaging waste reduced. This involves examining the areas where packaging is used, i.e. at Goods Inwards, Work in Progress (WIP) and Finished Product areas.

Repak's focus through these surveys is to assist member companies to make their packaging systems as efficient as possible, giving the maximum packaging benefit, for the minimum environmental impact. In general, this focus on efficient packaging also leads to material cost reductions, transport cost reductions and other efficiency savings.

1.3 Company Background

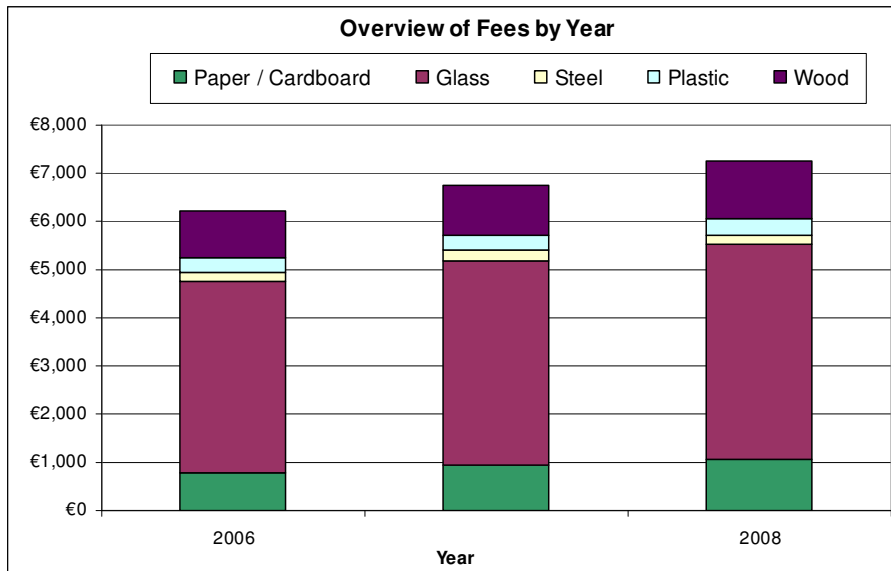
Alpack Ltd. is a privately owned company supplying the UK, Ireland and mainland Europe. They aim to provide their customers with an efficient and personal service. They are leaders in the supply of Twist-Off Closures and Glass Jars , Honey Jars , Storage Jars and Bottles into the UK for the past 21 years.

They have an excellent reputation in the industry for providing their customers with a first class service at competitive prices. (www.alpack.ie 22/10/2009)

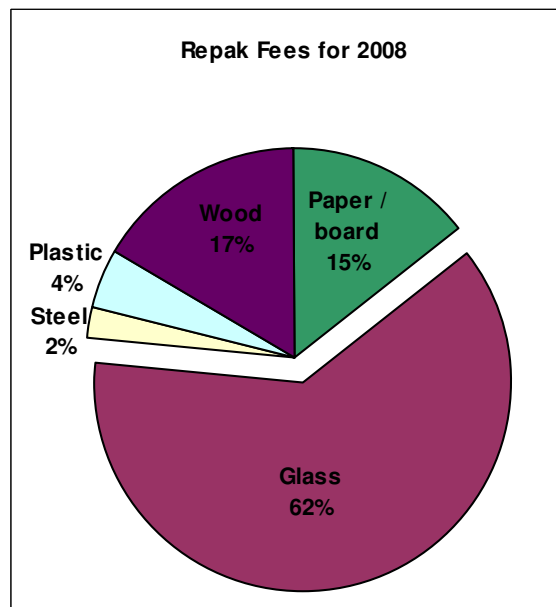
2. Current Packaging Systems

2.1 Overall Impact of Materials

Below is a graph showing the amount of fees paid by Alpack Ltd. to Repak over the past three years.



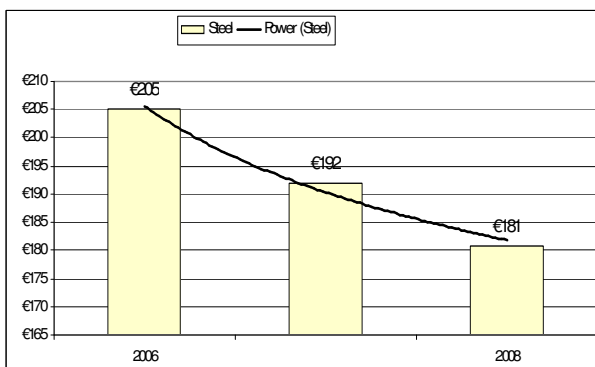
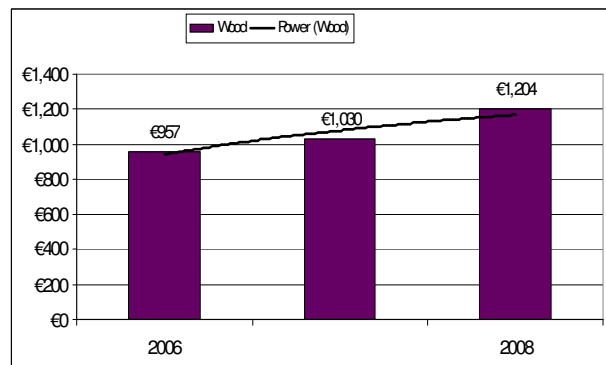
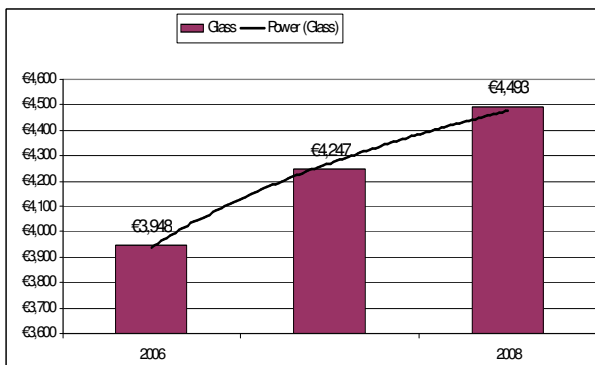
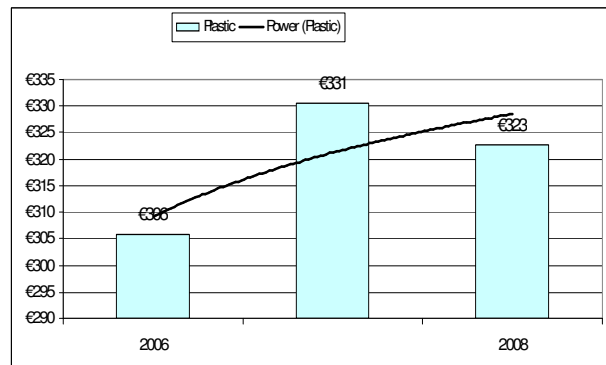
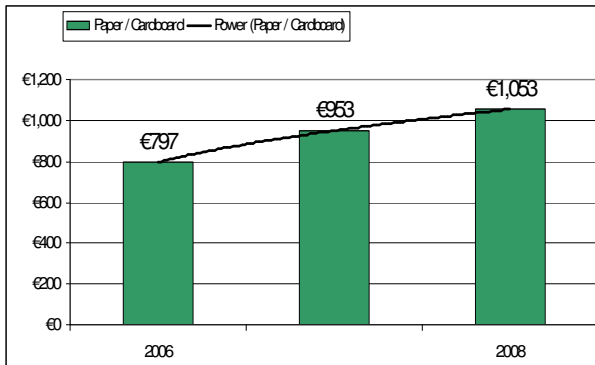
Although the amount of fees has been increasing, the majority of fees continue to come from one material type, i.e. glass. By splitting up these 2008 figures, we can see how much of an impact glass is having on the annual fees.



However, glass is the main product supplied by Alpack Ltd. and in general the glass containers are from 'off-the-shelf' designs, thereby limiting any scope to reduce the amount of glass material placed on the market.

2.2 Trends of Specific Materials

The following graphs show the trends for the five material types that Alpack Ltd. report on in their Repak returns, i.e. Paper / Cardboard, Glass, Steel, Plastics and Wood. While glass makes up the largest amount of the fees, paper/cardboard and wood also contribute a significant amount.



Steel is the only material showing a decreasing trend over the three years, but it is also the material that attracted the least amount of fees. Plastic has shown a slight decrease in 2008 over 2007.



3. Best Practice at Alpack Ltd.

Alpack Ltd. has already implemented a number of measures that can be seen as Best Practice in the optimisation of their packaging and the reduction of their packaging waste. Some examples are listed below.

3.1 Optimised board grades

Alpack use a single wall b-fluted board made from a combination of 125gsm Kraft and Test liners. Where a double walled board is required, the same liner grades are used to make up the BC fluted board.



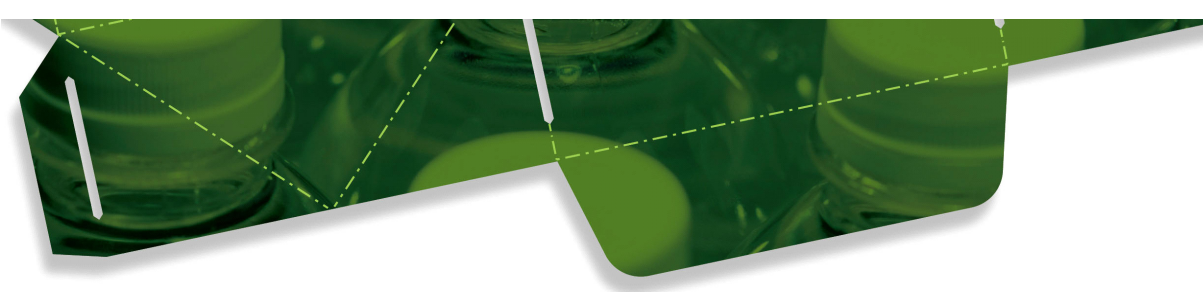
3.2 Optimised layer pads on glass container deliveries

Alpack also use these board grades on their glass liners and trays. Flat liners are used for straight edged glass containers and corrugated trays/covers are only used where glass has exposed shoulders or heels.



3.3 In-house Production of Corrugated Containers and Packaging

Alpack can form 0201 or die-cut cases and containers on-site, that are either glued (PVA) or stapled. This minimises the input packaging involved as the cases / containers are made from flat corrugated sheets.



3.4 Reusable corrugated plastic layer pads

Some glass is delivered to Alpack on plastic corrugated layer pads. For pallets that are broken down into smaller customer lots, the layer pads are collected at Alpack and returned to the glass supplier.

3.5 Optimised film gauges

Alpack use a 20 micron LDPE stretch-wrap film to surround outgoing deliveries. As these deliveries are handwrapped, 20 micron is a very light gauge of film. Alpack have also optimised their pallet hood plastic.

3.6 Returned process waste from Expanded Polystyrene (EPS) profiling

Large off-cuts from the EPS profiling area are stored together and returned to the supplier for recycling.



3.7 Reuse options for EPS and corrugated board process waste

Shredded process waste from the EPS profiling area is stored in large plastic bags and sold as a cushioning product. Off-cuts from the corrugated container forming area are sold to a customer who uses them to parcel books and other products for delivery.





4. Recommendations

Alpack Ltd. has an excellent packaging optimisation programme and actively seeks out methods of keeping packaging waste to a minimum. However, they are restricted in progressing further with some packaging waste reduction initiatives for a number of reasons:

4.1.1 Design scope limited by the purchase of off-the-shelf products and packaging

As the majority of products and associated packaging delivered to Alpack is off-the-shelf, Alpack have no control over the specification of its packaging. For two products that Alpack has designed (such as the $\frac{3}{4}$ lb preserve jar), all efforts have been made to minimise the amount of packaging associated with them.

4.1.2 Use of agents for the purchase of off-the-shelf products and packaging

The majority of Alpack's products are sourced from different countries through packaging agents. As Alpack are not dealing directly with the packaging supplier, it is difficult to organise re-usable packaging systems with them. The return of plastic layer pads to their supplier is an exception. Where Alpack do deal directly with the supplier, such as for Twist Off caps, they are only licensed to do this for small quantities of supply. For larger quantities (i.e. > 3 million caps) a distributor in the UK (Whitecap) manages the supply.

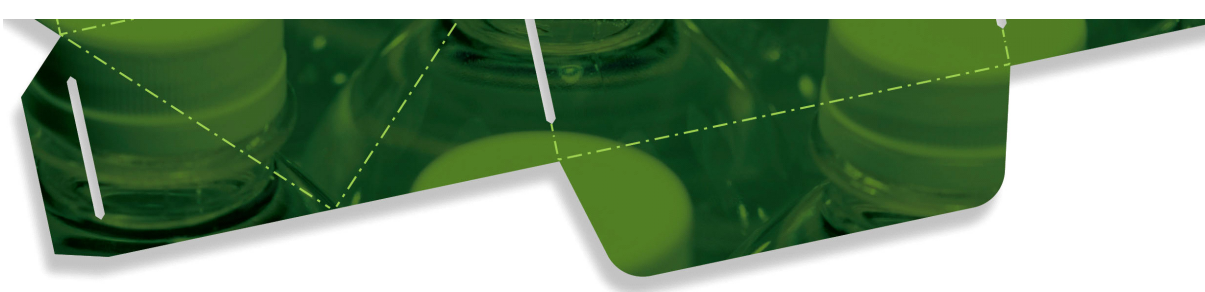
4.1.3 Use of distribution depots for supply of products to customers

Similarly with the supply of products to Alpack's customers, distribution depots are used in the UK. This also limits the scope for implementing returnable packaging systems with Alpack's customers.

While packaging systems in general are excellent at Alpack Ltd., the following are some ideas that may be of assistance to Alpack in reducing packaging waste further on their sites.

4.2.1 Packaging policies and specifications

Although Alpack may not be able to demand particular packaging formats from suppliers, it can be useful to outline how Alpack would prefer deliveries to be packaged. If an opportunity does arise, then Alpack can communicate this preferred specification to their supplier. Sample packaging policies and specifications are attached.



4.2.2 Bulk supply of Twist-Off caps and closures

It may be possible to replace the 50 cases of Twist-Off caps per pallet with one pallet container for customers who order by the pallet. This could be easier to dispense from as it is one packaging item, rather than opening and flattening 50 cases. These containers are also returnable, if a re-use supply chain could be established. This will only be an option if enough customers are interested in the idea, and the supplier can be persuaded to supply in this format. There may also be an intermediate solution, such as two bulk boxes or four bulk boxes per pallet. It would be worth discussing this with the supplier.

4.2.3 Re-usable corrugated plastic layer pads

Because there is a deposit charge on these plastic layer pads, Alpack store any of the pads from the pallets that they strip in-house. It may also be possible to take these layer pads back from some customers and add them to the stock that Alpack return to their supplier. This will lower the costs of the pads and ensure they do not have to be recycled by their customers.

4.2.4 Computerised palletisation software

As Alpack make their own corrugated cases and trays for smaller orders assembled from full pallets, there are a number of palletisation software packages that could be used to aid this process. The packages calculate the number of jars/bottles that can be placed on a pallet, and also the optimum number of jars/bottles per case or tray. Some of the more advanced editions can even optimise truck or container fills. These packages range in price, depending on their functionality. Repak use a version called 'Capelite' which is useful for most of the normal tasks you would expect when calculating pallet volumes. We would be happy to calculate any particular project for you, or you could investigate the products on Capepack's web-site if required. Details of this particular company are attached.



5. Further Assistance from Repak

For any future business changes to Alpack Ltd., advice and assistance will continue to be available through Repak's Membership Services department, as will training on the statistics return form if required.

Information is also available on Packaging Advisory Services, Packaging Test Facilities and Pallet Optimisation software if any changes to packaging designs were being considered, or any further packaging optimisation opportunities found.

The Repak web-site now contains examples of 'Best Practice' projects implemented by Repak members, as is information on the 'Essential Requirements' of the packaging legislation with regard to waste prevention and minimisation. See www.preventandsave.ie for further details. The website provides guidance on compliance with the packaging legislation, as well as ideas and suggestions on how to optimise packaging.

The Repak web-site also contains an up-to-date list of Recycling Contractors, grouped by county. This can be used to see who is operating in your area, under the Repak Payment Scheme (RPS). Contact details are provided so that comparisons can be made between contractor's prices and services if required. See www.repak.ie under 'Recycling Services' for further details. A list of Repak members is also available on this web-site under the 'Members Area' if you need to see if a particular supplier or competitor is a Repak member or not.



6. Conclusion

This particular report does not offer a huge amount in terms of recommendations but hopefully the few that are contained here will be of some benefit. From a Repak point of view there are excellent packaging systems in place, and we understand why there are limitations on developing some systems further, such as Re-use loops. I would like to thank Liam for his time on the day of the survey which allowed this report to be produced and for the recommendations to be made. If we can be of any further assistance, please let us know.

7. Attachments

- 7.1 Sample Packaging Policy
- 7.2 Sample Preferred Packaging Specification
- 7.3 Cape Systems Palletisation Software details

Colm Munnely,
04/11/09.