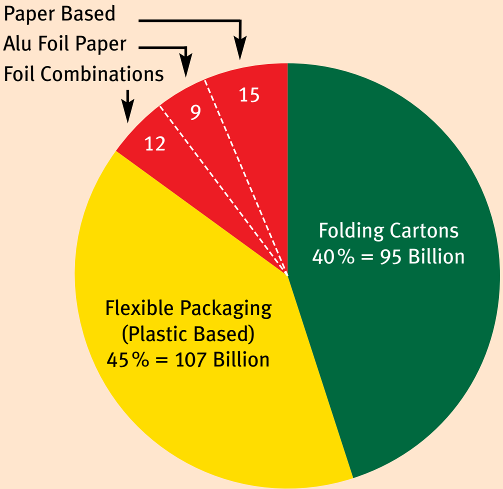
Pro Carton

The PRISM Study 2005

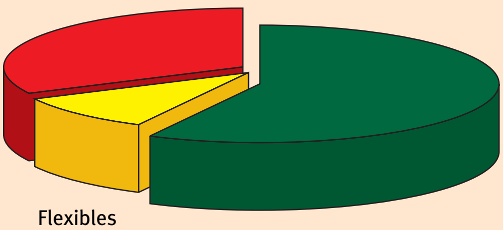
Usages of Cartons and Flexibles

(All = 238 Billion Units)



End Users' Packaging Preferences for a New Premium Product

% of FMCG Companies



"The Interface between Cartons and Flexible Packaging"

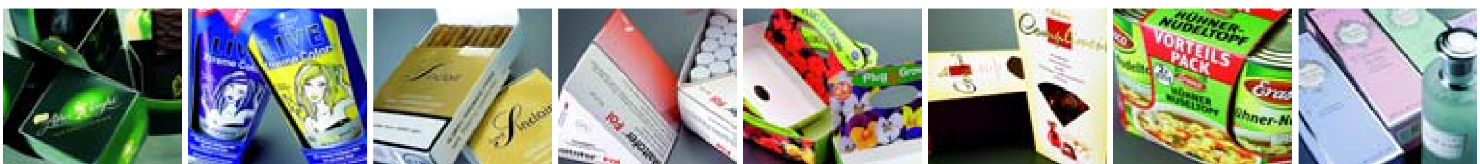
A Report Commissioned by Pro Carton

PRO CARTON

Association of European Cartonboard and Carton Manufacturers

"The Interface between Cartons and Flexible Packaging"

Index



Introduction

I am delighted to be able to present this summary of the key points from the study commissioned by Pro Carton from PRISM*.

We felt it was important that an independent study was carried out that would look at the interface between cartons and flexible packaging and this report seeks to highlight the main findings of this study.

It is of course important that the best possible understanding is reached to find out more about the following questions:

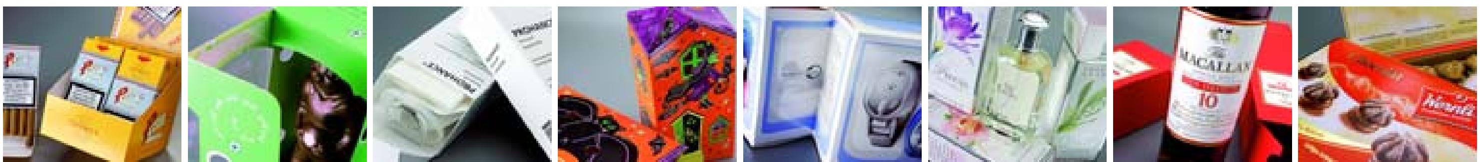
- **What is the current status in the markets for cartons and flexible packaging?**
- **What are the prospects for the future?**
- **What are the perceptions of the brand owners and retailers of these different types of packaging?**
- **What are the key trends in the markets?**
- **What are the purchasing intentions of FMCG companies?**

I feel sure that this summary provides an accurate and informative review of the findings of this study which summarises the main findings. I therefore hope that you find the information it contains both interesting and useful and that it offers additional information about this interesting and ever changing sector of the packaging market.

Franz Rappold
President
Pro Carton
Vienna,
September 2005

"We felt it was important that an independent study was carried out that would look at the interface between cartons and flexible packaging."

* "PRISM – Packaging Research Intelligence Strategies & Marketing Limited – was launched in 2003 by Simon Southern following the acquisition of Marketpower Ltd by Landell Mills Ltd. The Company provides market research and strategic marketing consulting dedicated to the packaging industry."



Overview of the study

"For this ambitious qualitative and quantitative report, PRISM interviewed 49 of the leading FMCG (Fast Moving Consumer Goods) companies across Europe as well as 10 leading retailers and over 20 industry experts to gain an insight into the current market breakdown and trends that were upcoming in the next 10 years."

Pro Carton is pleased to be able to introduce a summary of a members only report it has recently commissioned. "The interface between cartons and flexible packaging" was commissioned from PRISM and looks at the current market, the expectations for the future and the perceptions of the major players in the market.

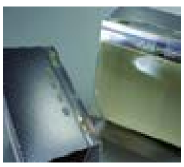
It also investigates the probable trends in the market and looks at various developments that will impact on both cartons and flexible packaging. By independently looking in depth at this market and the trends, carton suppliers will be better able to understand and react to the needs of the brand owners and retailers.

The report highlights the importance of packaging as it adds to its conventional role of protection and becomes in addition a medium of promotion and brand building. The report concludes that carton packaging is well placed to take advantage of the growth opportunities in European consumer goods markets. It closes by saying "Cartons offer brand owners the opportunity to provide product differentiation and a quality image using packaging that has distinct merchandising advantages and display appeal when compared with competing types of packaging".

We hope you will find the following pages interesting and if you need any further background please contact Pro Carton either at www.procarton.com or through your local office of which details can be found on page 15.

Richard Dalgleish
Managing Director
Pro Carton
Brussels,
September 2005





Key finding

Current market position

The report begins by looking at the current market position of cartons and flexible packaging in the FMCG (Fast Moving Consumer Goods) markets. The product areas covered are very wide and include all packaged food products with the exception of fresh foods, liquid foods and processed canned and bottled foods. It also includes all non food consumer products with the exception of consumer durables and industrial products.

In the European FMCG markets the report states that approximately 238 billion units of cartons and flexible packaging are used annually and of these 95 billion are cartons. Of the remainder, 107 billion are entirely flexible plastic packaging with the remaining 36 billion being made up of paper based flexible packaging, multi material packaging and other smaller types. Therefore in the markets studied across Europe about 40 % of the units are manufactured from cartons whilst 45 % are made from wholly plastic flexible packaging. Of the remainder (15 % / 36 billion) some 40 % are paper based packaging.

The report adds that in many product categories, switching between different types of material is not so apparent as had been the case some years ago but this still occurs and depends in some cases on the product formulations. For example, recent moves from powders to tablets in the detergent markets have led to an increase in the usage of cartons at the expense of plastics.

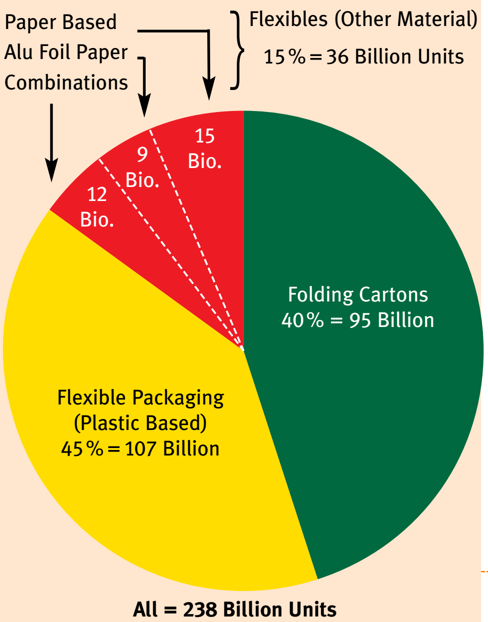
A change in the form of a product in a field such as detergents may cause a change in the type of packaging used.

Usage of Cartons and Flexible Packaging in Europe for FMCG

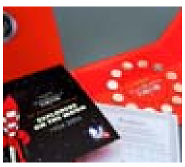
	Billion Units
Folding Cartons	95
Flexible Packaging	143
Total	**238**

Breakdown of Flexible Packaging into Types

	Billion Units
Paper Based	15
Aluminium, Foil and Paper	9
Aluminium Foil and Plastic Foil Combinations	12
Plastic Based	107
Total	**143**



Usage of cartons and flexible package in Europe for FMCG.





Key finding

Market expectations

- Demand for cartons will grow
- Need for improved visual appeal of packaging
- Increase in the need for shelf ready packaging, multi- and display-packs
- Additional packaging demands from the growth in retail own brands
- Increasing focus on environmental issues

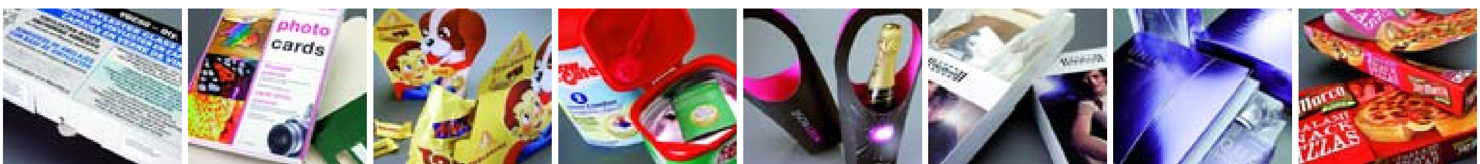
The study finds that between 2005 and 2010 the European market for cartons will increase by approximately 1.8 % per annum. The market for flexible packaging will, over the same period increase by between 1.5 % and 2 % per annum.

As well as organic growth, it adds that there will be increases in the market for cartons in several areas such as shelf ready packaging, multi-packs and display packs. The need for improved visual appeal and the requirements of shelf ready packaging will create particular opportunities for cartons made from both cartonboard and microflute.

Another area highlighted for growth in carton packaging is the own brand sector where retailers will continue to position their own brands more directly in competition with leading brands and with the quality perceptions of carton packaging, this will have a positive impact on carton usage.

Price pressure will continue but the report adds that the pressure on prices for flexible packaging will remain high and on balance, in the future, it appears that the effect of global oil prices and currency developments will have a greater impact on flexible packaging prices than on the prices of folding cartons which are made from a naturally occurring and renewable material.

Another change foreseen in the report is the increasing focus on environmental issues and it concludes that the folding carton industry is well ahead of flexible packaging on the two critical environmental issues, the use of a renewable resource and recyclability back to new packaging.



Perceptions and attitudes

Overall there is a strong preference for cartons amongst the FMCG companies interviewed. The main reasons for this preference are the protection, graphics and merchandising appeal offered by folding cartons, their environmental attributes and their suitability for differentiating premium products.

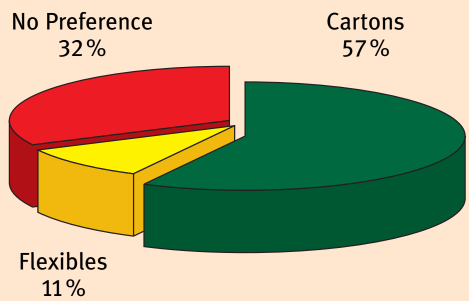
The key factors influencing the choice of packaging are display appeal, packaging costs, speed of filling and merchandising / shelf stacking attributes. Folding cartons score well for all these features though cost is more favoured for flexible packaging. However, many filling lines for cartons such as tobacco and detergents are amongst the fastest and most efficient. Additionally, it is well known that offset printed cartons have a cost advantage in the context of frequent switches of packaging design for example in the seasonal and promotional packaging sectors.

Flexibles are perceived to have better barrier properties but increasingly cartons are being combined with flexibles in such markets as ready meals and pet foods to offer both functionality and the point of sale attraction that cartons offer. It also reports that almost a third of the respondents mention merchandising difficulties and relatively poor product protection when using flexibles and 20 % expressed concerns on environmental issues.

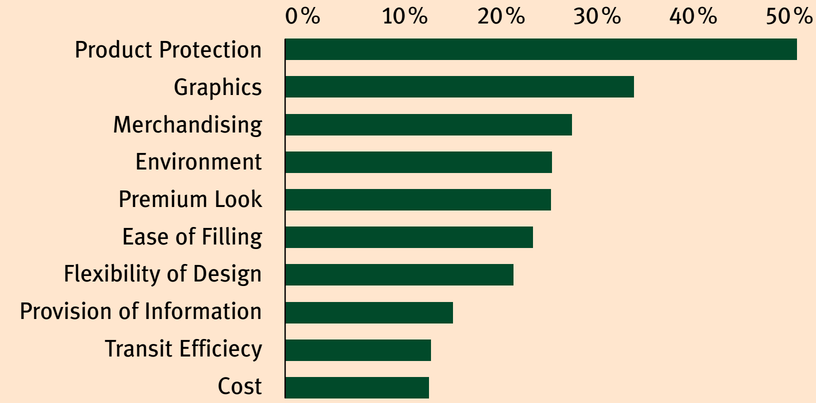
The report states that when launching a new premium product, 57 % of FMCG companies prefer to do so in cartons whereas only 11 % said they would choose flexible packaging. The strongest preferences for cartons lie in the confectionery, detergent and convenience food markets where visual appeal on the shelf is seen as most important.

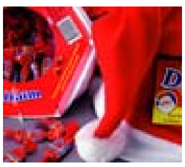
The table shows the strengths of folding cartons mentioned by FMCG companies, without any prompting from the researchers.

End Users' Packaging Preferences for a New Premium Product
% of FMCG Companies



Key Advantages of Folding Cartons
% of FMCG Companies







Key finding

Shelf ready packaging (SRP)

"SRP is set to become a permanent feature of the retail sector, as retailers seek to streamline their operations and maximise space productivity."

"Future SRP designs work for a complete range of retail products including sachets, trays, food cans, bottles or jars."

The increasing usage of shelf ready packaging is highlighted as a major growth area in the coming years. These initiatives which are designed to not only to increase the efficiency of shelf stacking in the supermarket but also reduce out of stock situations, have grown in recent years and this growth will accelerate across Europe but most notably in the UK, Benelux, France and Germany.

Transit outer sizes will reduce as their role moves from transit protection to display. This is because display outers will be designed to display one or two unit packs in order to satisfy the needs for greater diversity on the shelf. This need will therefore lead to an increase in the use of attractively printed outers reflecting a strong brand image of the product. It is probable that combinations of cartonboard display outers with corrugated transit hoods will be used increasingly to fulfil both the transport and point of sale requirements.

Ease of use at the point of sale will be critical so that the outer protection can be easily removed whilst retaining the overall brand image on the shelf and avoiding unnecessary unpacking and shelf stacking of individual products.

Convenient for retail markets: Shelf ready packaging and displays are efficient and will increase in the coming years.

Key finding

Consumer multi-packs

It is forecast that the usage of multi-packs will extend greatly beyond the traditional uses in the drinks and dairy markets. Multi-packs are easy to stack in store offering simplicity and efficiency. They are convenient for the consumer to select and handle and are simple to merchandise. With the increasing need to promote brands, multi-packs offer a greater surface area for high quality printing to reinforce the brand. Additionally, offering a number of products in a simple to buy pack, leads to an increase in sales value.

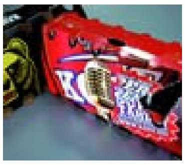
Cartonboard multi-packs have traditionally been successful in those markets where the product has an integral stacking strength but the rapid development of new styles and systems will offer opportunities in other market sectors.

Markets that are suggested as growth areas in multi-packs are in the pet foods, chilled and ambient foods and up market dehydrated foods. For example pet food pouches will increasingly be sold in cartonboard based multi-packs that will provide a better brand opportunity and offer greater convenience both for in store efficiency and consumer convenience.

"Special growth areas in multi-packs are in the pet foods, chilled and ambient foods and up market dehydrated foods."

Multi-packs will also capture the market in those fields with which they are not traditionally associated. They are convenient for consumers and easy to handle. For retailers they also offer a lot of advantages.








Key finding

Microflute

"Carton suppliers are well placed to meet the challenges of transit protection, display appeal and merchandising effectiveness especially with new types of microflute."

The microflute market accounts for about 20 billion units annually and will continue to grow at a rate of around 4.7% per annum so that usage by 2010 will be nearly 32 billion units. This growth will be driven by demands for improved visual appeal and growth in multipacks and display outers.

The growth in shelf ready packaging will have a significant impact on the microflute market, because of the increasing need for smaller display outers. Increasingly, decorative microflute containers will be adopted as a substitute for conventional corrugated. These containers will be sufficiently robust and visually appealing to satisfy the joint requirements of transit protection, display appeal and merchandising effectiveness.

75% of the microflute market is held by decorative processes including litho lamination, high quality post print flexo, preprint flexo, screen printing, and direct printed litho. This latter method has only emerged comparatively recently, and the carton suppliers are well placed to meet this challenge and offer solutions.

Demand for these decorative processes is forecast to grow at an average rate of 4.8% p.a., whilst unprinted containers and those printed on conventional in-line flexo presses will grow at a much lower rate of 1.1% p.a.

The increase of displays and shelf ready packaging also leads to a growth in the microflute market.








Sleeves and combination packaging

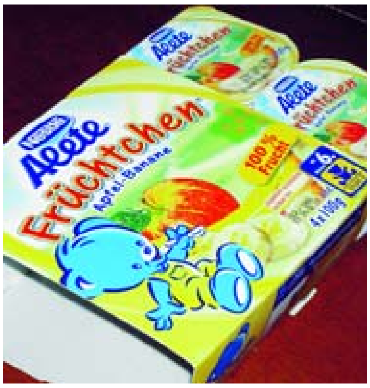
Cartons have been criticised for their lack of barrier properties and flexibles for their poor display and merchandising properties and for this reason the report finds that there will be growth in the use of cartons in combination with other materials.

One major sector will be the continuing development of ready meals where the food is packed into a plastic tray and a sleeve made of cartonboard used to cover the tray so providing both additional protection and high quality print to help with the merchandising of these products. Whilst this market is well developed in some countries in Europe, there is an increasing demand for ready meals and the combination of cartonboard and plastic will continue to grow. With the rapid development especially in Eastern Europe of the ready meals market this multi materials system that exploits the best properties of both materials will continue to grow.

Another area identified is the increasing use of barrier boards to manufacture cartons. With the growth in the prepared food markets, allied to the developments in barrier technology, cartons can now be used for a whole range of different applications in the food and related fields. Again in using cartons the brand owner and retailer can ensure the best possible image for the product and this is becoming particularly important in the own brand sector where growth is forecast to be high.

Barrier boards allow difficult products to be packed directly into cartons without the need for additional inner wrapping or lining. This is done with a wide range of extrusions and laminations of base boards such as folding boxboards (FBB), solid bleached sulphate (SBS), recycled boards (WLC) and solid unbleached board (SUB).

"There will be growth in the use of cartons in combination with other materials, plastics extrusions and laminations."



Combinations of cartonboard and plastic will continue to grow as for example the demand for ready meals increases. Ready meals are often packed into a plastic tray and a sleeve made of cartonboard.








Key finding

Quality perceptions

When launching a premium product 57% of FMCG respondents said that they would use cartons as a first choice whereas only 11% said they would use flexibles. The strongest preferences for cartons were in the confectionery, biscuit and convenience food sectors and none of the respondents in the these markets said they would prefer to use flexibles.

Product differentiation in the own label sector at the point of sale, needs to distinguish between premium and general own label products and FMCG responses indicate that cartons offer the best opportunity to maximise sales in these areas. Cartons allow this product differentiation across the range of different types of products and the quality image of cartons can be enhanced still further for the higher grade own brand products.

The stronger preference for flexibles is in the dehydrated food market but even then less than a third expressed a positive preference and over 50% had no firm preference. The reasons for the preference for flexibles in these markets has been the development of attractively printed pouches.

Cartons are first choice in the premium sector.









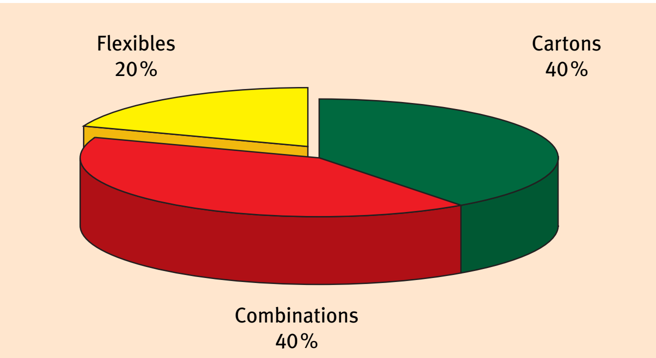
Key finding

Purchasing intentions

When asked whether they would be likely to switch products into folding cartons, flexible packaging or combination packs in the future about half of the respondents said they were likely to make changes.

Of these 40% expected to use more cartons as a replacement for flexibles. A further 40% anticipated using more cartons in combination with flexibles and less than 20% expected to make changes from cartons to flexibles. The report adds that the most likely areas for gains in cartons are the confectionery, detergent and dehydrated foods sectors but it also adds that whilst pouches will continue to grow the use of cartons in combination with pouches will increase to help with the promotion and merchandising of these products.

FMCG companies see the best opportunities for folding cartons in multipacks and shelf ready packaging as this is where the combined properties of cartons and flexibles can be exploited to the best effect in terms of merchandising and projecting a quality image.



Packs expected to gain share in future.

Purchasers in fast moving consumer goods companies see the best opportunities for folding cartons in multi-packs and shelf ready packaging.








Key finding

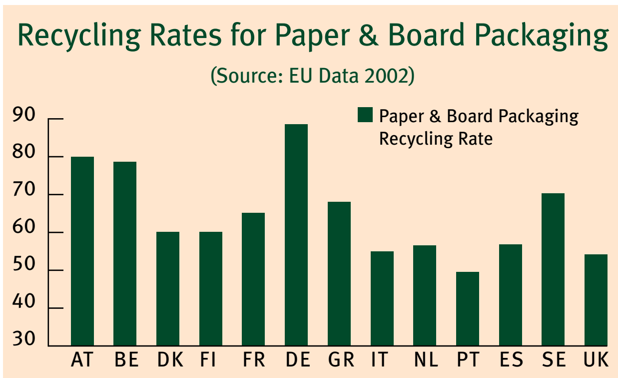
Environmental issues

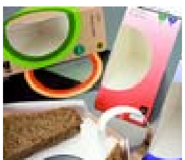
Most FMCG companies recognise the environmental argument in favour of cartons and end users are well aware that flexible packaging has a problem in this respect. When asked for the key advantages and disadvantages of cartons and flexible packaging, environmental issues were seen as a clear advantage for cartons but a clear disadvantage for flexible packaging.

The two most important elements on environmental matters raised by FMCG's were the recyclability and the use of a renewable resource. In both instances cartons were seen as clearly better and it is stated in the report that "Attempts by the flexible packaging industry and its suppliers to develop more environmentally friendly products have met with only limited success, and the level of flexible packaging recycled back into packaging is effectively nil." In additions it is stated that over 80 % of flexible plastic packaging used in Europe is based on non renewable resources.

Respondents also felt that cartons were rightly regarded as a natural material and therefore had a natural and friendly image at the point of sale.

Awareness of the environment is important for younger and older consumers. Cartonboard is, and has the image of a natural material and thus complies with the demands of environmental compatibility and responsibility.










Contacts for further information

HEAD OFFICE
Phone: +32 2640 4955
info@procarton.com
www.procarton.com

AUSTRIA
Phone: +43 1 218 6918
austria@procarton.com
www.procartonaustria.com

BELGIUM
Phone: +32 2343 6474
jan.cardon@ecmabel.be
www.procartonbelgium.com

FRANCE
Phone: +33 1 5389 2480
procarton-France@wanadoo.fr
www.procartonfrance.com

GERMANY
Phone: +49 6251 136995
info@procarton.de
www.procartongermany.com

GREECE
Phone: +30 210 3610143
procarton-hellas@procarton.com
www.procartongreece.com

ITALY
Phone: +39 02 76320924
ibitaliy@procarton.com
www.procartonitaly.com

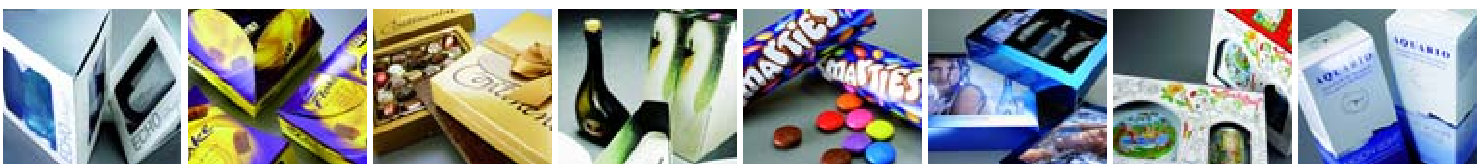
NETHERLANDS
Phone: +31 7031 23911
netherlands@procarton.com
www.procartonnetherlands.com

NORDICA
Phone: +46 650 740 445
nordica@procarton.com
www.procartonnordica.com

SPAIN
Phone: +34 93 481 6165
spain@procarton.com
www.procartonspain.com

SWITZERLAND
Phone: +41 1 266 9923
info@procarton.ch
www.procartonswitzerland.com

UK
Phone: +44 20 7915 8390
uk@procarton.com
www.procartonuk.com



What is Pro Carton?

Pro Carton is the European Association of Cartonboard and Carton manufacturers. Headquartered in Brussels, it has offices in 11 countries in Europe who, through various publications, activities and events, promote the use of Cartons and Cartonboard to a wide variety of people and groups.

HEAD OFFICE

Pro Carton
250 Avenue Louise
B-1050 Brussels
Phone Belgium: +32 2 640 4955
Phone UK: +44 1635 298192
info@procarton.com
www.procarton.com