Title: A CONTAINER AND BLANK

Abstract: The invention relates to a container and a blank for a container. More specifically but not exclusively, the invention relates to a food container and a blank for a food container. The blank (201) comprises a paperboard layer and a larger film layer to allow improved sealing of a container formed from the folded blank (201). The invention further relates to a method of forming a container from said blank, and to a method of forming the blank itself.
The invention relates to a container and a blank for a container, and more specifically but not exclusively, to a food container and a blank for a food container. The invention further relates to a method of forming a container from said blank, and a method of forming the blank itself.

Sandwiches and other convenience foods are often pre-prepared and presented in packaging ready for purchase. The packaging used is usually manufactured from either a plastics material or from paperboard. For the purposes of this specification 'paperboard' is considered to encompass paper, cardboard and similar materials.

Given that this packaging has to be disposed of, paperboard containers are preferable from an environmental standpoint. Company specific graphics, logos and trademarks can also be applied during the manufacturing process far more easily than for plastic containers. Nonetheless, plastic containers remain popular because they are generally capable of forming a better seal and thereby prolonging the shelf life of the product contained therein. Typically, paperboard containers folded from blanks struggle to achieve a good airtight seal. The paperboard is also susceptible to damage from grease, fat or other liquids in the food products. If grease is allowed to soak into the paperboard, then both the outward appearance and the structural integrity of the container are compromised.

In order to further extend the shelf life of products, it is known to employ a technique known as 'modified atmosphere packaging' to reduce the amount of Oxygen remaining in a sealed container. This can take the form either of vacuum packaging, where the atmosphere within the packaging is removed entirely, or gas flushed packaging, where the atmosphere within the packaging is forced out by the addition of a gas such as Nitrogen and/or Carbon Dioxide. In both processes, the quality of the seal provided on the packaging is of paramount importance. Seals of the requisite quality are not currently available on conventional paperboard blanks.
Accordingly, it is an object of the present invention to provide a container, or a blank for a container, such that an improved seal can be provided to enable the use of modified atmosphere packaging.

According to a first aspect of the present invention there is provided a blank for assembly into a food product container, the blank comprising a paperboard layer and a film layer, wherein the film layer is larger in area than the paperboard layer and extends beyond an edge of the paperboard layer.

Because the film layer extends beyond the periphery of the paperboard layer, the finished container may be sealed by bonding film to film rather than film to paperboard or paperboard to paperboard. A better seal can be thereby obtained. Preferably, the film layer is applied over the entire paperboard layer and extends beyond the edge of the paperboard layer around the entire periphery of the paperboard layer. The amount by which the film layer extends beyond the paperboard layer, or the 'overlap', may be uniform around the periphery of the paperboard layer. It may be preferable, however, if the overlap is greater in certain areas than in others. For example, it may be preferable if the overlap in regions of the blank which will form an opening of the container is greater than elsewhere. Some areas need not incorporate any overlap at all.

The film layer may be laminated to the paperboard layer, either over the entire paperboard layer or at key positions around the periphery of and apertures in the paperboard layer. Said apertures may provide windows in the finished blank.

The blank may comprise at least one panel of a generally triangular shape. In one embodiment, the blank comprises a substantially rectangular central panel with opposed pairs of major and minor sides, and two pairs of further panels integrally connected to the central panel at the major and minor sides respectively. One or both pairs of side panels may have side edges which extend at oblique angles to the sides of the central panel.
A webbing section is preferably provided between two panels which, when the blank is assembled, form two abutting walls of the container. The webbing section may comprise two webbing portions, possibly of differing sizes, with a fold line therebetween. Alternatively, or additionally, an aperture may be provided in the paperboard layer of the webbing section. The fold line is preferably formed by creasing rather than by scoring, as are any other fold lines provided on the blank.

Panels may be provided on the blank to form a flange portion around an opening formed for receiving food when the blank is assembled. A panel may also be provided to form a closable lid when the blank is assembled.

The film layer of the blank further serve as a barrier coating for the blank and is preferably susceptible to heat sealing and/or RF welding. For example, the film may be of a plastics material such as polyethylene, acrylic or similar. The film should, in general, be liquid and/or gas impermeable, although a degree of gas permeability may be preferable when the contents of the container are required to 'breathe' during storage. In the context of the present application, 'liquid impermeable' is taken to imply in particular that the film is resistant to grease, fat and other liquids found in foods.

The present invention further provides a food product container comprising a paperboard layer and a film layer, wherein the film layer extends beyond the paperboard layer around an opening of the container. The container is preferably formed from a blank as previously described. The container may take any number of forms including, but not limited to, that of a sandwich container or noodle pot, and is preferably formed by folding and heat sealing the blank.

Preferably, an amount of surplus film is provided around all free edges of the opening of the container (which may comprise a flange portion), and of a lid portion (which may be formed as a further panel of the blank or may be a separate part). The amount of surplus provided need not be uniform. The sealing of the container may then be achieved through direct contact of sealing means with the film. The blank may fold into a substantially
triangular prism with one open side, in particular into a container suitable for sandwiches. Alternatively, the blank may fold into a substantially square tub shape, for containing noodles or similar.

5 According to a third aspect of the present invention there is provided a method of forming a food product container comprising the steps of taking a blank according to any of claims 1 to 18, folding and bonding the blank to form a food receiving container, placing food into said container and sealing a lid portion to an opening of the container, wherein the atmosphere in the container is modified prior to the sealing of the lid portion. Preferably, sections of the surplus film extending beyond the periphery of the paperboard are bonded to one another.

Preferably the bonding is achieved by heat sealing. Modified tooling, specific for the task in hand, will greatly simplify the container forming process.

15 The modification of the atmosphere in the container may be achieved through gas flushing the container with, for example, Nitrogen and/or Carbon Dioxide, or through vacuum packing.

20 Where webbing sections are provided on the blank, these may be folded to the outside of the finished container to avoid the presence of cut edges on the interior of the container. If the webbing section is formed from two webbing portions with a fold line therebetween, these two webbing portions may be bonded to one another before the webbing section is bonded to the container to improve the sealing. An aperture may also be provided in one webbing portion and positioned, when folding the blank, against the outside of the container. Common bonding means may then be used to bond both webbing portions to the wall of the container.

The present invention further provides a method of forming a blank for a container, comprising the steps of cutting a paperboard substrate to a desired size and shape, cutting a film layer to a larger size than the paperboard substrate, and joining the
paperboard substrate and film layer together such that the film layer overhangs the edges of the paperboard substrate.

The film layer may be substantially the same shape as the paperboard layer and be centrally positioned thereon so that the overhang is uniform. Alternatively, the shape of the film layer may differ and/or the film layer may be positioned off centre so that an uneven overhang is provided.

The film layer is preferably applied to the substrate by lamination. Apertures, at least some of which may form windows in the finished container, may be cut into the paperboard substrate before the film layer is applied.

The film may be applied over apertures in the paperboard layer to provide windows in the blank. Previously, it has been commonplace to cut a blank to shape, apply a liquid impermeable coating, cut a window aperture, and separately bond a window piece of plastics film over the aperture. By forming a window using a film layer which is liquid impermeable and/or sealable, the manufacture of the blank is streamlined, and the integrity of the finished container is improved.

For ease of manufacture, the film layer may be applied before fold lines and any apertures in webbing sections are formed.

A better understanding of the present invention will be obtained from the following detailed description of particular embodiments. The description is given by way of example only and makes reference to the accompanying drawings in which:

Figure 1 is a plan view of a blank according to a first embodiment of the present invention;

Figure 2 shows the blank of Figure 1 after some initial folding;
Figure 3 shows the blank of Figure 2 close to the end of the folding process;

Figure 4 is a perspective view of a container formed from the blank shown in Figure 1;

Figure 5 is a plan view of a blank according to a further embodiment of the present invention;

Figure 6 shows the blank of Figure 5 after some initial folding;

Figure 7 shows the blank of Figure 5 close to the end of the folding process;

Figure 8 is a perspective view of a container formed from the blank shown in Figure 5; and

Figure 9 shows a plan view of a blank according to a third aspect of the present invention.

The figures show blanks for a sandwich container and a noodle pot in unassembled, part assembled and assembled states. It will be understood that the invention is also applicable to blanks for containers for a variety of different purposes.

Referring first to Figure 1, a blank 1 is shown with webbing sections 20 between panels 4, 5 which will, in use, form abutting walls of a container 7 shown in Figure 4. The blank 1 comprises a paperboard layer and a layer of film. The film layer is applied over the entire surface of the paperboard layer, and extends beyond the edges of the paperboard around the entire periphery, to provide an overhang of film 30 around the entire periphery of the blank 1.

The webbing sections of this particular embodiment comprise two substantially similar portions 20a, 20b with a webbing fold line 21 therebetween. Between each webbing
portion 20a, 20b and an adjacent panel 5, 4; a panel fold line 9 is provided. One of the webbing portions 20b is shown with an aperture 8 in the form of a circular hole. Alternatively, the webbing portion 20b may comprise an aperture of any other shape, or another form of discontinuity as indicated by dotted line 10 for example, spaced from the webbing fold line 21. The dotted line 10 shows a discontinuity in the form of a cut-away section removing part of a free edge 22b of the webbing portion 20b of the paperboard layer. A flange-forming portion 11 is also shown around the edge of the blank 1. A flange fold line 6 is provided between the flange forming portion 11 and the panels 4, 5. In this embodiment, the fold lines 2, 3, 6, 9, 21 are all formed as creases.

When the blank 1 is folded to form a container the webbing sections 20 fold like a concertina at their panel fold lines 9, and webbing fold lines 21 and lie flat against the side panels 4. The blank 1 once folded forms a container with an opening defined by the flange fold line 6 between the outside edges of the panels 4, 5 and the flange forming portions 11. The overhang of film 30 is present around the entire opening. Once folded into shape the panels 4 are bonded to the webbing sections 20. The provision of the holes 8 allows bonding means applied to the side panels 4 to bond to both webbing portions 20a, 20b. A number of bonding means are applicable, but in this embodiment the film is heat sealable. The film overhang 30 provides an increased area for heat sealing, and also allows the heat sealing apparatus to apply heat directly to the film layer rather than having to heat the film through a layer of paperboard. The provision of the holes 8 in the webbing areas 20b, allows the side panels 4 to bond directly to the webbing areas 20a by virtue of the heat sealable film. Alternatively, adhesive may be applied either to the entire area which will fall under the webbing portions 20b, or to just the area beneath each hole 8. In this case a seal is created by the adhesive bonding both webbing portions 20a, 20b to the side panel 4 of the finished container 7. In either case, the film overhang 30 at the periphery of the webbing portions 120 also helps to bond the webbing portions 120 to the side panels 4.

Although the embodiment shown provides holes 8 or other apertures in a webbing portion 20b, it may be beneficial in ensuring a complete seal of the film layer if such holes are not provided. The webbing portions 20a, 20b may be joined together by the sealing of the film
overhang 30 at edges 22a,22b of the paperboard layer. The complete webbing sections 20 may then be bonded to the side panels 4 by adhesive or by other means. Alternatively, and perhaps most preferably, the holes 8 may be cut only in the paperboard layer of the blank 1 before the film layer is applied. In this way, complete heat sealing of the container 5 would remain possible, without the disadvantage of having holes in the film layer.

Figures 2 and 3 show two stages of folding of the blank 1 to form a finished container. Figure 2 shows the initial part of the folding process, with the panel fold lines 9 being folded in the opposite direction to the webbing fold lines 21 to provide the concertina type fold described above. The holes 8 in the paperboard layer can be seen approaching the side panels 4 of the blank 1. Figure 3 shows the blank 1 almost completely folded. The webbing fold lines 21 are shown protruding into the inside of the container and the holes 8 in the paperboard layer are just visible within the concertina fold adjacent the side panels 4. Figure 3 also shows the flange forming portion 11 being folded back at the flange fold 6.

Referring now to Figure 4, with the same reference numerals used for like components, there is shown a fully assembled container 7 from the blank 1 of Figure 1. The holes 8 in the paperboard layer are now completely covered by the webbing sections 20a, and hence are not shown in the drawing. It can be seen that the webbing fold lines 21 of the webbing sections 20 extend right to the opening of the container. As a result, the cut lines 22a, 22b at the edge of the paperboard layer of the blank 1, are adjacent the flange fold line 6 at the edge of the side panel 4. No cut edges are exposed on the interior of the container, and the cut lines 22a,22b are sealed by virtue of the film overhang 30, which minimises the possibility of ingress of fat or oil. Successful bonding of the container is still possible due to the provision of the holes 8 in the paperboard layer of the webbing portions 20b, and the film overhang 30.

Figure 5 shows a plan view of a blank 101 according to a further embodiment of the invention. The blank 101 is suitable for the formation of a noodle pot, but the various
features shown are equally applicable to blanks for the formation of sandwich containers, or containers for a number of different purposes.

As in the blank 1 of Figure 1, the blank 101 has webbing sections 120 between panels 104, 105 which will, in use, form abutting walls of a container 107 shown in Figure 8. Two webbing portions 120a, 120b make up each webbing section 120. A webbing fold line 121 is provided between the first webbing portion 120a and the second webbing portion 120b. The second webbing portion 120b is shown with an aperture 108 therethrough, although this is not essential. A flange forming portion 111 is also provided around the edge of the blank 101 to form a flange when the container 107 is in its folded state. Around the edge of the blank 101, an overhanging film layer 130 can be seen. The blank 101 of Figure 5 has a rectangular base panel 110 having major and minor sides. The larger wall panels 104 extend from each of the major sides of the base panel 110. Major base fold lines 103 are provided between the base panel 110 and the larger side panels 104. Similarly, minor base fold lines 102 are provided between each minor side of the base panel 110 and each smaller side panel 105. Panel fold lines 109 are provided between the webbing section 120 and each side panel 104, 105, and flange fold lines 106 between each side panel 104, 105 and the flange forming section 111 of the blank 101. The flange forming portion 111 is provided in three separate parts, one part joined to each smaller side panel 105, and one part joined to one of the larger side panels 104. Each side panel 104, 105 is in the shape of an isosceles trapezium, such that the folded container 107 has an opening larger than its base panel 110.

Unlike the sandwich box blank 1 of Figure 1, the blank 101 of Figure 5 further includes a lid panel 124. The lid panel 124 extends from the edge of one of the larger side panels 104 opposite to the base panel 110. A lid fold line 126 is provided between the lid panel 124 and the larger side panel 104. A window portion 128 spans the lid panel 124 and the major side panel 104, crossing the lid fold line 126. The window portion 128 comprises a transparent plastics material, which is preferably formed from the film layer of the blank 101.
The method of forming the blank 101 of Figure 5 will now be described.

A substrate material, in this instance paperboard, is die cut to a suitable size and shape, and an aperture is die cut to form the window portion 128 of the finished blank 101. Preferably, further apertures 108 are also cut in the second webbing portions 120b. A liquid impermeable film, for example polyethylene, is then laminated over the entire substrate, filling in the window portion 128. In the example shown, the film layer of the two layer laminate material is deliberately made larger than the die-cut paperboard layer, but closely reflects the desired shape for the finished blank 101. Accordingly, an overhang of film 130 is provided around the entire periphery of the blank. Finally, fold lines 102, 103, 106, 109, 121, 126 are formed, as creases, in the two layer laminate material. The finished blank 101 therefore benefits from a single, continuous film layer which serves as both a liquid impermeable barrier inside the container 107 once folded to prevent grease, fat or other liquids present in the food product from soaking into the paperboard substrate, and as a window portion 128 in the finished container 107. The film is, additionally or alternatively, heat sealable to bond the container 107 together.

By providing a single continuous film layer serving a number of purposes, the manufacturing process is simplified. Also, the lack of discontinuities in the film, even when apertures are provided in the paperboard layer, means that the integrity of the finished container 107 is further improved. This integrity can be further improved by forming the container 107 in a particular way, as described below with reference to Figures 6 to 8.

A blank 101, as shown in Figure 5 is formed as described above. The side panels 104, 105 are folded towards each other to form a tub-like shape, with a heat sealable film on the inside. As the side panels 104, 105 are folded at the major base fold lines 103 and minor base fold lines 102, the panel fold lines 109 will naturally fold in the opposite direction to the webbing fold lines 121, causing the webbing sections 120 to concertina. This concertina action is shown in Figure 6. Significantly, the webbing sections 120 should, at this stage, be made to fold to the outside of the container 107.
When the larger side panels 104 and the smaller side panels 105 are in abutment, the first webbing portions 120a and the second webbing portions 120b are pressed together and heat sealed to one another. The heat sealing makes use of the film layer lying over the webbing portions 120a, 120b, and of the film overhang 130 to give the largest possible heat sealable area and improve the seal. The base panel 110, larger side panels 104 and smaller side panels 105 now form a substantially sealed tub shape, with no part of the folded blank 101 extending into the interior. The sealed webbing sections 120 extend outwards from the corners of the tub formed by the side panels 104, 105 as shown in Figure 7.

A small amount of heat sealable film is visible through the aperture 108 provided in the paperboard layer of each of the second webbing portions 120b. The webbing sections 120 are folded back against the outside of the tub, such that the aperture 108 in the paperboard layer of each second webbing portion 120b lies against the outside of a smaller side panel 105. The webbing sections 120 are then heat sealed to the outside of the smaller side panels 105 to provide greater structural strength to the container 107, and to improve the seal. As a result of the continuous film layer and the apertures 108 in the paperboard layer, a double thickness of heat sealable film is available for sealing the webbing sections 120 to the side panels 105. The flange forming portions 111 are folded back to form a flange to which the lid panel 124 can seal once food has been placed in the container 107.

The finished container 107 is shown in Figure 8 with the film overhang 130 clearly shown around the opening of the container 107 and the lid panel 124. The lid panel 124 can be heat sealed, RF welded or bonded by some other suitable means. The film overhang 130 provides a larger area for sealing of the container 107, and also provides a more flexible edge during the sealing process. As a result, it becomes possible for the sealing of the container 107 to comprise a 'gas flushing' step, or other modified atmosphere packaging techniques.
By forming the container 107 as described above, a good seal can be formed. Typically, webbing portions 120 are folded to the inside of a finished container 107, where the edges of said webbing portions are susceptible to the ingress of fats and oils from food provided in the container 107. Folding the webbing outwardly, as herein described, avoids these problems. Furthermore, by folding the webbing portions 120a,120b to the outside when forming the container 107, they are more easily accessible for heat sealing to one another, which provides a better seal for the finished container.

The method described above would also be applicable to containers of other shapes and configurations, for example, where a lid is provided as a separate component. Also, while the provision of apertures in the webbing is preferable, it is by no means required. A blank 101 could be folded as above, with the webbing sections bonded together by heat sealing or other means, and then simply glued to the outside of the container.

Figure 9 shows a further embodiment of a blank 201 according to the present invention. The blank 201 shown is for a sandwich container with an integral lid 224. An overhang of film 230 is provided around the whole periphery of the blank 201. The film is applied over the entire paperboard layer and is preferably thermally bonded thereto. Although the film layer may be bonded to the entire surface of the paperboard layer, it is only necessary to bond the layers together in certain key areas 232. The key areas 232 are shown in grey in Figure 9, and essentially comprise the area adjacent the periphery of the blank 201, the area around window forming apertures 228, and the base portion 210 of the blank which will, in use, form the apex of a triangular sandwich container. The blank 201 is similar in terms of construction to the blanks 1,101 of previous embodiments. However, unlike the blanks 1,101 according to the previous embodiments, the third blank 201 does not incorporate holes or apertures in its webbing sections 220.

One of the main advantages of providing apertures in the webbing section of a paperboard blank is that it allows a container to be easily bonded together without leaving cut edges on the interior. Before the innovation of providing holes in webbing sections, container blanks commonly took the form shown in Figure 9. The webbing sections 220 comprise
two webbing portions 220a,220b of differing sizes. The larger webbing portion 220a
overlies the smaller webbing portion 220b when the container is formed, and allows both
webbing portions 220a,220b to be simultaneously bonded to a side panel 204 of the
finished container. The bonding is possible because larger webbing portion 220a extends
beyond the end of the smaller webbing portion 220b at the fold line 221 therebetween.

However, in the past, the short distance 234 by which the larger webbing portion 220a
extends beyond the smaller webbing portion 220b led to a cut edge of paperboard being
present on the inside of the finished container. Cut edges of paperboard provide a point of
ingress for grease and other liquids contained in food, and are therefore undesirable on
the interior of a paperboard food container. In the case of the present invention, the
surplus of film 230 around the edge of the blank 201 of Figure 9 will overlie and seal the
short cut edges 234 of the paperboard when the container is formed, and will prevent such
ingress of grease to the container. For this reason it is no longer essential, in ensuring a
robust seal, that apertures are provided in the webbing portions of the blank. Nor is it
considered necessary that the fold lines between webbing portions be continuous, or that
the webbing sections be folded to the outside of a finished container.

Although a blank 201 for a sandwich container is shown in Figure 9, the features
described above are equally applicable to other container types.

The present invention is not limited to the specific embodiments described above.
Alternative arrangements will be apparent to a reader skilled in the art. For example the
shape and form of the webbing sections may vary from that shown, as may the shape of
the container. A lid may be provided either as a separate component, or as an additional
panel of the blank.

Furthermore, although all embodiments shown in the drawings have a uniform amount of
film material overhanging the entire periphery of the paperboard blank, it is also possible
that the amount of overhang may vary, or even that certain areas of the periphery may
incorporate no overhang at all.
In all cases, the film overhang 30,130,230 provides an improved seal by increasing the sealable area and allowing the direct sealing of film-to-film as opposed to film-to-paperboard or paperboard-to-paperboard, and also enables modified atmosphere packaging techniques.
CLAIMS:

1. A blank for assembly into a food product container, the blank comprising a paperboard layer and a film layer, wherein the film layer is larger in area than the paperboard layer and extends beyond an edge of the paperboard layer.

2. A blank according to claim 1, wherein the amount by which the film layer extends beyond the paperboard layer is uniform around the periphery of the paperboard layer.

3. A blank according to claim 1, wherein the amount by which the film layer extends beyond the paperboard layer varies around the periphery of the paperboard layer.

4. A blank according to any of claims 1 to 3, wherein the film layer extends beyond the edge of the paperboard layer around the entire periphery of the paperboard layer.

5. A blank according to any of the preceding claims, wherein the film layer is laminated to the paperboard layer.

6. A blank according to any of the preceding claims, wherein the paperboard layer comprises apertures which form windows in the blank.

7. A blank according to any of the preceding claims comprising a substantially rectangular central panel with opposed pairs of major and minor sides, and two pairs of further panels integrally connected to the central panel at the major and minor sides respectively, one pair of side panels having side edges which extend at oblique angles to the sides of the central panel.

8. A blank according to claim 7, wherein both pairs of side panels have side edges which extend at oblique angles to the sides of the central panel.
9. A blank according to any of the preceding claims, wherein a webbing section is
provided between two panels which, when the blank is assembled, form two
abutting walls of the container.

10. A blank according to claim 9, wherein an aperture is provided in the paperboard
layer of the webbing section.

11. A blank according to claims 9 or 10, wherein the webbing section comprises two
webbing portions with a fold line therebetween.

12. A blank according to claim 11, wherein one webbing portion is larger than the other.

13. A blank according to claim 11 or 12, wherein the fold line provided is a crease in the
blank.

14. A blank according to any of the preceding claims, wherein panels are provided to
form a flange portion around an opening formed for receiving food when the blank
is assembled.

15. A blank according to any of the preceding claims, wherein a panel is provided to
form a closable lid when the blank is assembled.

16. A blank according to any of the preceding claims, wherein the film layer is liquid
impermeable.

17. A blank according to any of the preceding claims, wherein the film layer is
susceptible to RF welding.

18. A blank according to any of the preceding claims, wherein the film layer is of a
plastics material.
19. A blank according to claim 18, wherein the film layer is polyethylene or acrylic.

20. A blank according to any of the preceding claims or to claim 39, wherein the film layer is susceptible to heat sealing.

21. A food product container comprising a paperboard layer and a film layer, wherein the film layer extends beyond the paperboard layer around an opening of the container.

22. A food product container according to claim 21, the container being formed from a blank as claimed in any of claims 1 to 20.

23. A food product container formed by folding and heat sealing a blank as claimed in claim 20.

24. A sandwich container according to any of claims 21 to 23.

25. A noodle pot according to any of claims 21 to 23.

26. A method of forming a food product container comprising the steps of taking a blank according to any of claims 1 to 20, folding and bonding the blank to form a food receiving container, placing food into said container and sealing a lid portion to an opening of the container, wherein the atmosphere in the container is modified prior to the sealing of the lid portion.

27. A method of forming a food product container according to claim 26, wherein the modification of the atmosphere in the container is achieved through gas flushing the container.

28. A method of forming a food product container according to claim 27, wherein the gas used in the gas flushing comprises Nitrogen.
29. A method of forming a food product container according to claim 27 or 28, wherein
the gas used in the gas flushing comprises Carbon Dioxide.

30. A method of forming a food product container according to claim 26, wherein the
modification of the atmosphere in the container is achieved through vacuum
packing.

31. A method of forming a food product container according to any of claims 26 to 30,
wherein sections of the surplus film extending beyond the periphery of the
paperboard are bonded to one another.

32. A method of forming a food product container according to any of claims 26 to 31,
wherein the bonding is achieved by heat sealing.

33. A method of forming a blank for a container, comprising the steps of cutting a
paperboard substrate to a desired size and shape, cutting a film layer to a larger
size than the paperboard substrate, and joining the paperboard substrate and film
layer together such that the film layer overhangs the edges of the paperboard
substrate.

34. A method of forming a blank according to claim 32, wherein the film layer is cut to
substantially the same shape as the paperboard substrate.

35. A method of forming a blank according to claim 32, wherein the film layer is cut to a
different shape to the paperboard substrate.

36. A method of forming a blank according to any of claims 33 to 35, wherein the film
layer is applied to the substrate by lamination.
37. A method of forming a blank according to any of claims 33 to 36, further comprising
the step of cutting at least one aperture in the substrate before the film layer is
applied.

38. A method of forming a blank according to any of claims 33 to 37, further comprising
the step of forming creases in the blank after the film layer has been applied.

39. A blank according to any of claims 1 to 19 comprising at least one panel of a
generally triangular shape.

40. A blank for a container substantially as herein described with reference to Figures
1, 2, 3, 5, 6, 7 and 9 of the accompanying drawings.

41. A food product container substantially as herein described with reference to Figures
4 and 8 of the accompanying drawings.

42. A method of forming a container substantially as herein described.

43. A method of forming a blank for a container substantially as herein described.
Fig. 1
### C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication where appropriate, of the relevant passages</th>
<th>Relevant to claim No</th>
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<tr>
<td>X</td>
<td>US 3 885 730 A (CHRISTENSSON OD W) 27 May 1975 (1975-05-27)</td>
<td>1,2,4,5, 9,11-13, 16-25, 33-36, 38,39</td>
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<tr>
<td>Y</td>
<td>the whole document</td>
<td>3,6,14, 26-32,37</td>
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<td>Y</td>
<td>WO 2007/012880 A (COLPAC LTD [GB]; GOLDMAN NEIL [GB]; MILLS FRANK [GB]; WRIGHT PHILIP (G) 1 February 2007 (2007-02-01) page 6, lines 22-27; figures 10-12</td>
<td>6,37</td>
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* Further documents are listed in the continuation of Box C

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Date of the actual completion of the international search: 18 June 2009

Date of mailing of the international search report: 26/06/2009

Name and mailing address of the ISA/Authorized officer:

European Patent Office, P B 5818 Patentlaan 2 NL- 2280 HW Rijswijk, Tel (+31-70) 340-2040, Fax (+31-70) 340-0016

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