Reclosable film packaging, especially flow-wrap packaging

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ABSTRACT

Film packaging, especially flow-wrap packaging (10) having a longitudinal sealed seam (19) and two transverse sealed seams (20, 21), at least the longitudinal sealed seam (19) being spaced apart from the associated longitudinal edges (15, 16) to form two longitudinal edge strips (17, 18) of different widths which are folded one over the other and onto the outside of the packaging (10). A restickable adhesive, especially a cold-seal adhesive (23), has been applied to the portion (22) of the wider longitudinal edge strip (18) that overhangs the narrower longitudinal edge strip (17), which adhesive is arranged to be stuck, when the packaging (10) is closed, to a "release" area (24) formed on the outside of the packaging.
RECLOSABLE FILM PACKAGING, ESPECIALLY FLOW-WRAP PACKAGING

[0001] The invention relates to a film packaging, especially flow-wrap packaging having a longitudinal sealed seam and two transverse sealed seams, at least the longitudinal sealed seam being spaced apart from the associated longitudinal edges to form two longitudinal edge strips of different widths which are folded one over the other and onto the outside of the packaging.

[0002] Packaging of that kind are used for the packaging of usually solid items, but also of soft, possibly flowable, items. The items are wrapped in a rectangular or square film blank, there thus being formed a longitudinal edge opposite the wrapping edge and, extending between that edge and the wrapping edge, two transverse edges. The latter edges and the longitudinal edge are sealed to one another to form longitudinal and two transverse sealed seams, so that the item is securely packaged and protected from environmental influences. The transverse sealed seams generally extend directly along the transverse edges, that is to say the lateral boundary of the packaging, while the longitudinal sealed seam is spaced apart from the associated longitudinal edges of the film blank. As mentioned at the beginning, the longitudinal sealed seam is to be spaced apart from the associated longitudinal edges by different amounts, so that two longitudinal edge strips of different widths are formed. It is thus possible to open the packaging conveniently from the longitudinal edge side. It is merely necessary to separate the two longitudinal edge strips, which are each defined between the longitudinal sealed seam and the longitudinal edge and which are in direct contact with one another, by means of two thumbs or two fingers and then to hold each of them firmly between thumb and finger. The two longitudinal edge strips can then be pulled apart to open the longitudinal sealed seam. Because one longitudinal edge strip is wider than the other longitudinal edge strip, it is considerably easier to separate the two longitudinal edge strips. Conventionally, one longitudinal edge strip is about from 1.0 mm to 2.0 mm wider than the other longitudinal edge strip.

[0003] The problem underlying the present invention is to provide a film packaging of the said kind which is simple to open and which, after opening and possibly removal of some of the packaged product, can be satisfactorily closed again.

[0004] That problem is solved according to the invention by the characterizing features of claim 1. Advantageous structural details and embodiments are described in the subsidiary claims.

[0005] A key feature of the present invention is therefore that a restickable adhesive, especially a cold-seal adhesive, has been applied to the portion of the wider longitudinal edge strip that overhangs the narrower longitudinal edge strip, which adhesive is arranged to be stuck, when the packaging is closed, to a "release" area formed on the outside of the packaging. That "release" area can be prepared with a so-called "release" lacquer. Alternatively, it is also possible to apply to the overhanging portion of the wider longitudinal edge strip a cold-seal adhesive which is associated with a cold-seal adhesive on the outside of the packaging. Those two cold-seal adhesive layers associated with one another can be detached from one another and stuck together again, generally from three to fifteen times, without the closure strength being noticeably affected. That applies especially to acrylic-based cold-seal adhesives.

[0006] The adhesive on the overhanging portion of the wider longitudinal edge strip is preferably in the form of at least one adhesive strip extending parallel to the longitudinal extent of that longitudinal edge strip. Non-continuous application, especially in the form of a row of dots, is of course equally satisfactory.

[0007] For easier production, but especially also for easier opening of the packaging, the two transverse edge regions, and in particular the transverse edge regions of the overhanging portion of the wider longitudinal edge strip that face the transverse sealed seams, are kept free of adhesive. It is thus possible for the longitudinal edge strips stuck onto the outside of the packaging to be opened very simply from the transverse edges of the packaging. The transverse edge regions of the longitudinal edge strips accordingly each form a kind of grip tab by means of which the adhesive bond between the overhanging portion of the wider longitudinal edge strip and the associated outside of the packaging can very easily be released. Preferably, both transverse edge regions of the longitudinal edge strips that are folded one over the other are clamped simultaneously between thumb and index finger and turned upwards from the outside of the packaging so that the longitudinal edge strips each extend approximately perpendicular to the outside of the packaging and the pack contents. The two longitudinal edge strips can then be separated and pulled apart from one another to open the longitudinal sealed seam in the way mentioned at the beginning.

[0008] Preferably, at least a portion of the longitudinal sealed seam is restickable, especially by means of cold-seal adhesive strips lying one on top of the other which are capable of multiple resticking. The transverse sealed seams can also be arranged to be capable of resticking.

[0009] In principle, however, it is also possible for both the longitudinal sealed seam and the transverse sealed seams to be implemented as heat-sealed seams, with the result that they are not restickable after opening. Reclosure of the packaging can then be effected only in the longitudinal edge region, although such reclosure is only incomplete. The packaging preferably consists of a square or rectangular film blank, to one side of which adhesive, especially cold-seal adhesive, has been applied in the form of a square or rectangular frame, the first two opposing adhesive strips lying substantially directly along the corresponding edges of the packaging film blank and the other two opposing adhesive strips being spaced apart, and by different amounts, from the associated edges of the blank.

[0010] In accordance with one embodiment of the invention, at least the "release" area which is associated with an openable cold-seal adhesive strip is provided with a release lacquer. The release lacquer is either distributed over the entire surface of the "release" area or is arranged at least in some regions of the "release" area, for example in the form of dots, circles or stripes, so that it is possible to open the film packaging using only a small amount of force.

[0011] Furthermore, it is possible for the release lacquer also to be arranged on the side of the film forming the film packaging that is opposite the adhesive coating; that side is the opposite side of the film from the adhesive coating. Preferably, the release lacquer is not distributed over the entire surface of the rear side of the film, but is applied in particular in the region of the rear side of the adhesive strips in the
transverse and/or longitudinal direction, that is to say in release regions. It will be understood, however, that the release lacquer can also be provided over the entire surface or almost the entire surface of the rear side of the film. In the release regions too, the release lacquer can be applied in the form of a pattern or patterns.

Alternatively, it should be pointed out that the film forming the film packaging itself has release properties with respect to a cold-seal adhesive, but those properties are significantly less marked with respect to cold-seal adhesives than the release properties of a release lacquer. A film one side of which has been provided at least in some regions with a cold-seal adhesive layer can in that way be made available on a roll, from which the film can be unrolled to produce film blanks. Depending upon the adhesive power of the cold-seal adhesive, in regions of the film on the roll that are particularly subject to pressure as a result of rolling or stacking it is possible to provide a release lacquer in those regions, in addition to the release properties of the film itself, so that particularly good release properties are ensured by the application of release lacquer and the film is easily unrolled from the roll or removed from a stack.

An embodiment of a packaging constructed in accordance with the invention is described in greater detail below with reference to the accompanying drawings.

FIG. 1 shows a rectangular blank for a flow-wrap packaging according to the invention in a plan view on the side on which cold-seal adhesive strips for forming longitudinal and transverse sealed seams have been applied:

FIG. 2 shows a finished packaging in a plan view onto the side on which two longitudinal edge strips are folded one over the other onto the outside of the packaging:

FIG. 3 shows an end view of the packaging according to FIG. 2 and

FIG. 4 shows, likewise in an end view, the packaging according to FIG. 3 with longitudinal edge strips folded up from the outside of the packaging.

As already mentioned at the beginning, a flow-wrap packaging 10 (see FIGS. 2, 3 and 4) is produced from a square or rectangular (as herein according to FIG. 1) film blank 12. In accordance with FIG. 1, the film blank 12 is provided on one side with a cold-seal adhesive. The cold-seal adhesive has been applied in the form of a rectangular frame 11, the first two opposing cold-seal adhesive strips 14 lying directly along the corresponding edges of the packaging film blank 12 and the other two opposing cold-seal adhesive strips 13 being spaced apart, and by different amounts, from the associated edges 15, 16 of the packaging film blank 12. The cold-seal adhesive strips 13 therefore serve to form a longitudinal sealed seam 19 (see FIGS. 2, 3 and 4), whereas the cold-seal adhesive strips 14, laid one over the other, define two transverse sealed seams 20, 21.

Because the two longitudinal edges 15, 16 are spaced apart from the cold-seal adhesive strips 13, and accordingly also from the common longitudinal sealed seam 19, by different amounts, two longitudinal edge strips 17, 18 of different widths are formed. As can be seen especially in FIGS. 3 and 4, on the portion 22 of the wider longitudinal edge strip 18 that overhangs the narrower longitudinal edge strip 17 there has been applied a restickable adhesive, especially a cold-seal adhesive in the form of a cold-seal adhesive strip 23, which, when the packaging is closed in accordance with FIGS. 2 and 3, is arranged to be stuck to a "release" area 24 formed on the outside of the packaging 10. That "release" area 24 is indicated by dashed lines in FIG. 4. In FIG. 2, the "release" area 24 is concealed by the overhanging portion 22 of the wider longitudinal edge strip 18. The same also applies in the closed state of the packaging according to FIG. 3.

That "release" area is formed by a corresponding lacquer layer. Alternatively, however, the cold-seal adhesive strip 23 can be associated on the outside of the packaging with a counterpart cold-seal adhesive strip so that the two cold-seal adhesive strips can be detached from one another and, if required, stuck together again.

The two transverse edge regions 25, 26 of the overhanging portion 22 of the wider longitudinal edge strip 18 that are associated with the transverse sealed seams 20, 21 are kept free of adhesive, as can be seen especially in FIG. 1. As a result, when the packaging 10 is closed, the transverse edge regions 25, 26 do not stick to the outside of the packaging, with the result that in those regions a kind of grip tab is formed, with which the longitudinal edge strips 17, 18 folded one over the other can be raised upright in accordance with arrow 27 in FIG. 3 into a position in accordance with FIG. 4. On reclosure, the two longitudinal edge strips 17, 18 are folded over in the opposite direction onto the outside of the packaging in accordance with arrow 28 in FIG. 4.

As already mentioned at the beginning, the cold-seal adhesive for the cold-seal adhesive strip 23 preferably consists of an acrylic-based material. Such a material allows resticking at least three times, especially up to ten to fifteen times, without the closure strength being appreciably affected. Even after being restuck fifteen times, the closure strength should still exhibit about from 50% to 60% of the initial closure strength.

All the features disclosed in the application documents are claimed as being important to the invention, where they are novel with respect to the prior art either singly or in combination.

LIST OF REFERENCE NUMERALS

10 flow-wrap packaging
11 cold-seal adhesive frame
12 blank
13 cold-seal adhesive strip (for forming a longitudinal sealed seam)
14 cold-seal adhesive strip (for forming two transverse sealed seams)
15 longitudinal edge
16 longitudinal edge
17 longitudinal edge strip
18 longitudinal edge strip
19 longitudinal sealed seam
20 transverse sealed seam
21 transverse sealed seam
22 overhanging portion of the longitudinal edge strip 18
23 cold-seal adhesive strip
24 "release" area
25 transverse edge region
26 transverse edge region
27 arrow
28 arrow
1-10. (canceled)
11. A flow-wrap or other film packaging, said packaging having:
   a longitudinal sealed seam associated with longitudinal edges of said packaging, and
two transverse sealed seams, at least said longitudinal sealed seam being spaced apart from said associated longitudinal edges to form two longitudinal edge strips of different widths which are folded one over the other and onto the outside of the packaging, the wider longitudinal edge strip overhanging the narrower longitudinal edge strip, wherein:

- a cold-seal or other restickable adhesive is located on the portion of the wider longitudinal edge strip that overhangs the narrower longitudinal edge strip, and
- a “release” area is provided on the outside of the packaging, said adhesive being operative to stick, when the packaging is closed, to said “release” area.

12. A packaging according to claim 11, wherein said adhesive is in the form of at least one cold-seal adhesive strip extending parallel to the longitudinal extent of said longitudinal edge strips.

13. A packaging according to claim 11, wherein the two transverse edge regions, or the transverse edge regions of the overhanging portion of the wider longitudinal edge strip that face the transverse sealed seams, are free of adhesive.

14. A packaging according to claim 11, wherein at least a portion of said longitudinal sealed seam is operative to be restickable.

15. A packaging according to claim 14, wherein cold-seal adhesive strips lying one on top of the other and capable of multiple resticking are provided.

16. A packaging according to claim 11, wherein said packaging consists of a square or rectangular film blank, to one side of which cold-seal or other adhesive has been applied in the form of a square or rectangular frame, the first two opposing adhesive strips lying substantially directly along the corresponding edges of the packaging film blank and the other two opposing adhesive strips being spaced apart, and by different amounts, from the associated edges of the blank.

17. A packaging according to claim 11, wherein at least said “release” area has, at least in some regions, a release lacquer.

18. A packaging according to claim 11, wherein film forming the film packaging has a release lacquer on its side remote from an adhesive coating.

19. A packaging according to claim 18, wherein said release lacquer on said side remote from said adhesive coating is in the region of the rear side of said adhesive strips in a direction(s) selected from the group consisting of the transverse direction, the longitudinal direction, and the transverse and longitudinal directions.

20. A packaging according to claim 16, wherein the film forming the film packaging has release properties with respect to the cold-seal adhesive, which properties are less marked than the release properties of the release lacquer.

21. A packaging according to claim 11, wherein the cold-seal adhesive consists of an acrylic-based material and allows resticking a number of times selected from the group consisting of at least three times, and up to ten to fifteen times, without the closure strength being appreciably affected (that is to say still exhibiting at least about from 50% to 60% of the initial closure strength).

22. A packaging according to claim 11, wherein the longitudinal and transverse sealed seams are each in the form of non-restickable heat-sealed seams.

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