The vacuum packing envelope for cooking which is characterized in that a sealing part (110) having a certain width is formed for vacuum packing food by heating and thermally melting a film, and a vapor discharge part (130) which is disposed at a portion of the sealing rim part (110) for automatically discharging vapor with the aid of an inner pressure when heating and cooking food, comprises an easy peel tape (120) which crosses, in a horizontal direction, the sealing rim part; and a vapor discharge part (130) which is formed in the sealing weak part (111) where the easy peel tape (120) and the sealing rim part (110) overlap with each other.
Fig. 1a

Prior Art
Fig. 1b

Prior Art
Fig. 11
VACUUM PACKING ENVELOPE FOR COOKING

TECHNICAL FIELD

[0001] The present invention relates to a vacuum packing envelope for cooking, and in particular to a vacuum packing envelope for cooking which can be used for the purposes of various applications with the aid of easier pressure controls and makes it possible to prevent an operation error of a vapor discharge part in such a way that an easy peel tape horizontally crossing a sealing rim part is formed, and a vapor discharge part is formed in a sealing weakening part where the easy peel tape and the sealing rim part overlap with each other.

BACKGROUND ART

[0002] When a packing envelope sealingly filled with a retort food, a frozen food or something is heated in a microwave oven, the pressure of the envelope rises by the vapor coming from the stuff as it is heated, and the packing envelope might explode, and the stuff flies. As a container is destroyed, the inner side of the microwave oven might be messed up or a user might have a burn injury.

[0003] In order to prevent the above problems, it is needed to partially open a packing envelope before it is heated in the microwave oven or a hole is made at the body of the packing envelope, thus discharging vapor coming from the packing envelope to the outside, whereby to prevent the destroy of the packing envelope.

[0004] The above method takes an ordinary user a long time to use. When the above method is actually applied, since the vapor generating due to the heating in the microwave oven is instantly discharged to the outside of the packing envelope, the stuff to be heated and cooked might lose a heating and steaming effect, which results in the bad taste of the food.

[0005] As another conventional art for resolving the problems encountered in the conventional art, there is a Korean patent publication number 10-2008-0007647 entitled the packing envelope for a microwave oven.

[0006] FIGS. 1a and 1b are schematic views illustrating a conventional packing envelope for a microwave oven.

[0007] The conventional packing envelope 1 is characterized in that an outer sealing part 3 is formed at a corner part, and a no-sealing part 4 is formed near the outer sealing part 3, and a vapor discharge sealing part 6 formed by a weakening part 5 by means of a heart shaped through hole formed in the no-sealing part 4 is connected to an edge sealing part 2. In addition, a notch 7 is formed near an upper side of the edge sealing part 2 for the purpose of opening the packing envelope 1 after it is heated in a microwave oven.

[0008] The weakening part 5 is configured in such a manner that the width gradually increases from an upper side, which is to open, to a rear side. A protrusion part 51 is formed from the rear side to the inner side of the weakening part 5. The rear side of the weakening part 5 is partitioned into two parts 52 and 53.

[0009] As shown in FIGS. 1a and 1b, the vapor discharge sealing part 6 of the packing envelope 1 is configured in such a manner that the initial cut point B of the vapor discharge sealing part 6 is positioned on a circle R with the radius corresponding to the distance PA from the central point P of the packing envelope to the center of the inner end of the edge sealing part by adapting, as a reference point, the central point (P: hereinafter referred to the central point P) coming into inner contact with the center of the inner end of the edge sealing part of two short sides of the packing envelope.

[0010] Here, the initial cut point B of the vapor discharge sealing part 6 represents the point where the outer sealing part 3 starts opening at the vapor discharge sealing part 6 when the packing envelope is heated in the microwave oven.

[0011] The packing envelope of the conventional art is directed to adjusting the cooking pressure depending on the bonding width and the binding strength of the outer sealing part 3, so it is needed to precisely adjust the bonding width and the binding strength of the sealing part 3, otherwise, the vapor does not discharge at a proper pressure, so the envelope might explode by the vapor pressure. The vapor might start discharging too early, so cooking cannot be properly conducted.

DISCLOSURE OF THE INVENTION

[0012] Accordingly, it is an object of the present invention to provide a vacuum packing envelope for cooking which can be used for the purposes of various applications with the aid of easier pressure controls and makes it possible to prevent an operation error of a vapor discharge part in such a way that an easy peel tape horizontally crossing a sealing rim part is formed, and a vapor discharge part is formed in a sealing weak part where the easy peel tape and the sealing rim part overlap with each other.

[0013] To achieve the above objects, there is provided a vacuum packing envelope for cooking which is characterized in that a sealing part having a certain width is formed for vacuum packing food by heating and thermally melting a film, and a vapor discharge part which is disposed at a portion of the sealing rim part for automatically discharging vapor with the aid of an inner pressure when heating and cooking food, comprising an easy peel tape which crosses, in a horizontal direction, the sealing rim part; and a vapor discharge part which is formed in the sealing weak part where the easy peel tape and the sealing rim part overlap with each other.

[0014] In addition, the easy peel tape forms a multiplex sealing part which is formed of at least one band.

[0015] In addition, the sealing weak part comprises an expanding part which expands inwardly in the envelope.

[0016] At this time, a vapor discharge part is formed only at a sealing weak part which forms an expanding part.

[0017] In addition, the vapor discharge part is formed in a porous shape.

[0018] In addition, in the vapor discharge part forms a passage for the sealing weak part to pass through from the inner side to the outer side of the envelope.

[0019] At this time, the vapor discharge part forms a passage from the sealing weak part to pass through from the inner side of the outer side of the envelope, the outlet part of the passage being expanded to the region of the sealing rim part which is out of the sealing weak part.

ADVANTAGEOUS EFFECTS

[0020] The present invention is easy to use and the reliability of the product can be enhanced because it can be used for the purposes of various applications with the aid of easier pressure controls, and the present invention makes it possible to prevent an operation error of a vapor discharge part in such a way that an easy peel tape horizontally crossing a sealing rim part is formed, and a vapor discharge part is formed in a
sealing weakening part where the easy peel tape and the sealing rim part overlap with each other.

BRIEF DESCRIPTION OF THE DRAWINGS

The present invention will become better understood with reference to the accompanying drawings which are given only by way of illustration and thus are not limitative of the present invention, wherein;

FIG. 1 is a schematic view illustrating a conventional packing envelope for cooking;

FIG. 2 is a schematic view illustrating a vacuum packing envelope for cooking according to an embodiment of the present invention;

FIG. 3 is a cross sectional view taken along line A-A of FIG. 2;

FIGS. 4A and 4B are cross sectional views illustrating an example that a vacuum packing envelope for cooking is expanded by means of a vapor pressure according to the present invention;

FIG. 5 is an enlarged view illustrating a sealing weak part according to the present invention;

FIG. 6 is an enlarged view illustrating an example that a sealing weak part of FIG. 5 is open by means of a vapor pressure;

FIG. 7 is a plane cross sectional view of FIG. 6; and

FIGS. 8 through 12 are schematic views illustrating various examples of a vacuum packing envelope for cooking according to the present invention.

MODES FOR CARRYING OUT THE INVENTION

The preferred embodiments of the present invention will be described with reference to the accompanying drawings.

FIG. 2 is a schematic view illustrating a vacuum packing envelope for cooking according to an embodiment of the present invention. FIG. 3 is a cross sectional view taken along line A-A of FIG. 2. FIGS. 4A and 4B are cross sectional views illustrating an example that a vacuum packing envelope for cooking is expanded by means of a vapor pressure according to the present invention. FIG. 5 is an enlarged view illustrating a sealing weak part according to the present invention. FIG. 6 is an enlarged view illustrating an example that a sealing weak part of FIG. 5 is open by means of a vapor pressure, and FIG. 7 is a plane cross sectional view of FIG. 6.

As shown in FIG. 2, there is provided a vacuum packing envelope 100 for cooking which is characterized in that a sealing rim part 110 with a certain width is formed for the purpose of vacuum packing food by thermally melting a film, and a vapor discharge part 130 is formed at a portion of the sealing rim part 110 for the purpose of automatically discharging vapor by means of the inner pressure when cooking food.

Here, the film might be formed of a plastic stacked film, and the thermoplastic resin having a heating and sealing property forming the plastic static film is formed of one selected from the group consisting of an olefin resin formed of a low density polyethylene, a linear low density polyethylene, a middle density polyethylene, a high density polyethylene, a polypropylene, a propylene-ethylene copolymer, an ethylene-acrylic acid vinyl copolymer, an ethylene unsaturated carboxylic acid and an olefin resin which is graft-transformed anhydride, a polyamide to co-polyamide which has a relatively low melting point or a low softening point, a polyester to co-polyester resin and a poly carbonate resin.

In addition, the other plastic material stacked with a thermoplastic resin with a heating and sealing property might be formed of a thermoplastic resin which has a heating and sealing property or does not have the same.

As the thermoplastic resins, there are poly olefin vinyl such as crystalline poly propylene, crystalline propylene-ethylene copolymer, crystalline poly butene-1, crystalline poly 4-methyl pentene-1, low density, middle density or high density polyethylene, ethylene-acetic acid vinyl copolymer (EVA). EVA hydrolysate, ethylene-acrylic acid ethyl copolymer (EEA), ion cross-linking olefin copolymer (ionomer), etc; aromatic vinyl copolymer such as polystyrene, styrene-butadiene copolymer, etc; halogenation vinyl copolymer such as vinylidene chloride resin, etc; poly acryl resin; nitrile copolymer such as acryl nitrile styrene copolymer, acryl nitrile styrene butadiene copolymer; polyester such as poly ethylene telephthalate, poly tetrathylene phthalate, etc; various pol carbonate; fluorine resins; polycrystal such as polyoxymethylene.

The above thermoplastic resin might be used in a singular form or might be used in a combination with at least two components or might be used by adding various additives to the thermoplastic resins.

The plastic stacked film used in the present invention might be formed by sacking, in a known method, a non-stretchable or a single axial or biaxial stretchable film made from a resin which has a heating sealing property or does not have the same.

The present invention is directed to a vacuum packing envelope for microwave oven made by heating and sealing the above plastic stacked film in a known method. In case that a stacked film of a thermoplastic resin having a heating and sealing property and a thermoplastic resin not having a heating and sealing property, it is needed to heat and seal the thermoplastic resins to be inner sides, the thermoplastic resins having a heating and sealing property.

The packing envelope made from the above material has a vapor discharge part 130 at the sealing rim part 110 for discharging vapor generating by the inner pressure when heating food.

Here, an easy peel tape 120 is formed horizontally crossing the sealing rim part 110. The vapor discharge part 130 is formed in the sealing weak part 111 where the easy peel tape 120 and the sealing rim part 110 overlap with each other.

Here, the easy peel tape 120 is made of an easy peel film which is easy to seal and peel off in an easier way.

The vapor discharge part 130 might be formed of a porous shape.

A cut line 140 might be formed in a horizontal direction at an upper side where the easy peel tape 120 is formed.

The operation of the present invention will be described.

An instant food to be cooked simply using a microwave oven or the something is inputted into the vacuum packing envelope 100 for cooking according to the present invention.

The user wants what to cook the packed food inputs the packing envelope 100 into a microwave oven and heats the same.

As the food in the packing envelope 100 emits vapor during the cooking, and a pressure generates therein.
As shown in FIGS. 4A and 4B, the easy peel tape 120 is separated by means of the pressure. At this time, the easy peel tape 120 might be formed at both sides of the packing envelope or might be formed at one side of the same.

As shown in FIGS. 6 and 7, the sealing weak part 111 gradually opens, and the vapor discharge part 130 gradually opens, thus discharging vapor.

At this time, the width of the easy peel tape 120 might be 30-60 mm. The cooking pressure can be adjusted by adjusting the width of the easy peel tape 120.

In case of porridge, since the cooking time is short, and it is needed to discharge vapor to even lower pressure, the width is adjusted smaller, but in case of rice, since the cooking time takes long, and it is needed to discharge vapor to relatively higher pressure, the width is adjusted larger.

FIGS. 8 to 12 are schematic views illustrating various examples of the vacuum packing envelope for cooking according to the present invention.

FIG. 8 is a view of an example of a multiplex sealing part 121 having at least one band at the easy peel tape 120, and FIGS. 9 to 12 are views illustrating an expanding part which is formed at the sealing weak part 111 and is expanded inwardly in the envelope.

At this time, a vapor discharge part 130 might be formed only at the sealing weak part 111 which forms the expanding part.

FIGS. 11 and 12 are views illustrating an example that a passage for the vapor discharge part 130 to pass through from the inner side of the sealing weak part 111 to the outside of the envelope. FIG. 12 is a view of an example that the outlet side of the passage is extended to the region of the sealing rim part 110 which is out of the sealing weak part 111.

As described above, the present invention can be used for the purposes of various applications with the aid of easier pressure controls and makes it possible to prevent an operation error of a vapor discharge part in such a way that an easy peel tape horizontally crossing a sealing rim part is formed, and a vapor discharge part is formed in a sealing weakening part where the easy peel tape and the sealing rim part overlap with each other.

As the present invention may be embodied in several forms without departing from the spirit or essential characteristics thereof, it should also be understood that the above-described examples are not limited by any of the details of the foregoing description, unless otherwise specified, but rather should be construed broadly within its spirit and scope as defined in the appended claims, and therefore all changes and modifications that fall within the means and bounds of the claims, or equivalences of such means and bounds are therefore intended to be embraced by the appended claims.

What is claimed is:

1. A vacuum packing envelope for cooking which is characterized in that a sealing part (110) having a certain width is formed for vacuum packing food by heating and thermally melting a film, and a vapor discharge part (130) which is disposed at a portion of the sealing rim part (110) for automatically discharging vapor with the aid of an inner pressure when heating and cooking food, comprising:

   an easy peel tape (120) which crosses, in a horizontal direction, the sealing rim part; and

   a vapor discharge part (130) which is formed in the sealing weak part (111) where the easy peel tape (120) and the sealing rim part (110) overlap with each other.

2. The envelope of claim 1, wherein said easy peel tape (120) forms a multiplex sealing part (121) which is formed of at least one band.

3. The envelope of claim 1, wherein said sealing weak part (111) comprises an expanding part which expands inwardly in the envelope.

4. The envelope of claim 3, wherein a vapor discharge part (130) is formed only at a sealing weak part (111) which forms an expanding part.

5. The envelope of claim 1, wherein said vapor discharge part (130) is formed in a porous shape.

6. The envelope of claim 1, wherein said vapor discharge part (130) forms a passage for the sealing weak part (111) to pass through from the inner side to the outer side of the envelope.

7. The envelope of claim 6, wherein said vapor discharge part (130) forms a passage from the sealing weak part (111) to pass through from the inner side of the outer side of the envelope, the outlet part of the passage being expanded to the region of the sealing rim part (110) which is out of the sealing weak part (111).

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