



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 1 666 375 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:
07.06.2006 Bulletin 2006/23

(51) Int Cl.:
B65D 75/66 (2006.01) B65D 85/10 (2006.01)

(21) Application number: **04028423.4**

(22) Date of filing: **01.12.2004**

(84) Designated Contracting States:
**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HU IE IS IT LI LT LU MC NL PL PT RO SE SI SK TR**
Designated Extension States:
AL BA HR LV MK YU

(72) Inventors:
• **Aeschlimann, Reynald**
2035 Corcelles NE (CH)
• **Vuilleumier, David**
2013 Colombier NE (CH)

(71) Applicant: **Philip Morris Products S.A.**
2000 Neuchâtel (CH)

(74) Representative: **Morf, Jan Stefan et al**
Patentanwälte Abitz und Partner
Postfach 86 01 09
81628 München (DE)

(54) **Packaged article with wrapper**

(57) The invention provides a packaged article having an improved wrapper (2) for consumer goods comprises a film packaging material provided with a tear tape (4) and at least one barrier strip (14, 16) adjacent to the tear tape (4). In use, the barrier strip (14, 16) creates a predictable, predefined path for the tear tape (4) upon

opening of the wrapper (2). It is particularly advantageous if the barrier strip (14, 16) and tear tape (4) are provided on opposite sides of the film packaging material. A pull tab (10) and corresponding cut-out (12) may be provided in the film packaging material at opposite ends of the tear tape (4).

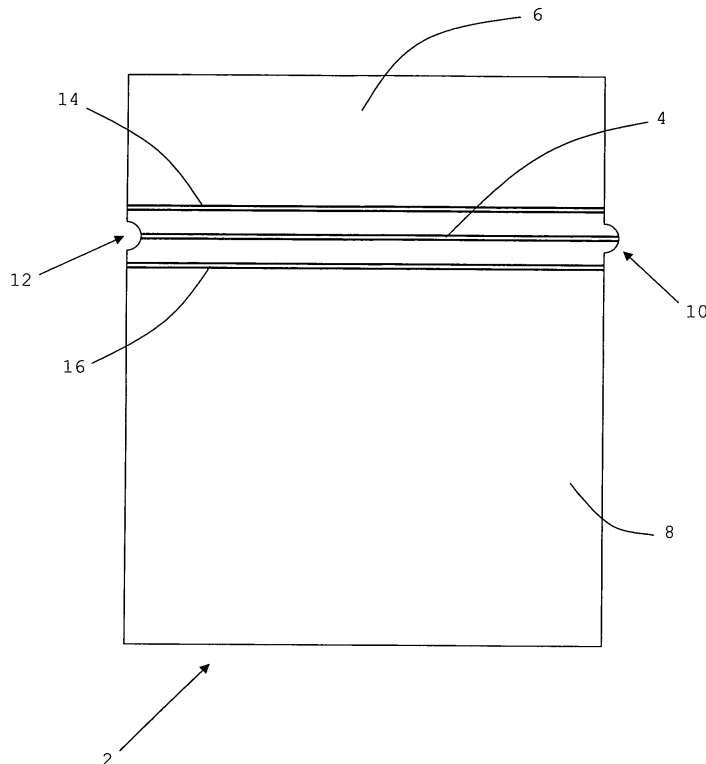


Figure 1

Description

[0001] The present invention relates to a packaged article having an improved wrapper and to a process for manufacturing such a wrapper. In particular, the invention relates to a packaged article having a wrapper comprising film packaging material provided with a tear tape, wherein the film is further provided with a barrier strip adjacent to the tear tape. The invention finds specific application in cigarette packs and cartons over wrapped with polyolefin films.

[0002] Individual cigarette packs, cigarette cartons or bundles containing a number of individual cigarette packs and a wide variety of other consumer goods are commonly over wrapped with a film packaging material. To enable the consumer to remove the wrapper and so access the goods, the film packaging material is typically provided with a tear tape. In use, the consumer tears the film by pulling on a tab provided at one end of the tear tape. The path along which the film packaging material is torn is, however, unpredictable, depending upon both the manner and direction in which the consumer pulls on the tab. As a result, opening of the wrapper frequently gives rise to a multiplicity of non-uniform, often disrupted, fragments, which must then be disposed of by the consumer.

[0003] There is a need for an improved wrapper which facilitates unpacking of a packaged article, for example, by enabling the consumer to tear or separate the filmic packaging material along a controlled path and into a predetermined number of pieces.

[0004] For example, it is known to provide leaflets or coupons on the outer surface of cigarette packs, beneath the film wrapper. Rather than being affixed to the packs themselves, these coupons or leaflets may be attached to the inner surface of the film. In such case it is desirable for the film to tear along a predictable, predefined path upon opening to allow the consumer ready access to the leaflet or coupon.

[0005] According to the present invention there is provided a packaged article having a wrapper wherein the wrapper comprises a film packaging material provided with a tear tape, characterised in that the film packaging material is further provided with at least one barrier strip adjacent to the tear tape.

[0006] According to the invention there is also provided a film suitable as packaging material which film comprises a tear tape characterised in that it further comprises at least one barrier strip adjacent to the tear tape.

[0007] In use, a tear formed in the film on one side of the barrier strip cannot propagate into the film on the other side of said barrier strip. The barrier strip thus controls the path along which the film is torn as the consumer pulls on the tear tape to open the wrapper. The film can thus be separated into a well-defined number of pieces of predefined size and shape. Advantageously, the number of film pieces upon opening is kept to a minimum, such as two or three, which can easily be removed and

disposed of by the consumer.

[0008] The packaged article may comprise any known consumer goods to which a wrapper comprising a film packaging material provided with a tear tape is commonly applied. Examples include, without limitation, cigarette packs and cartons, compact disc cases, DVD cases, video or audio cassette boxes, food and beverage containers, bundles of paper products and labels, envelopes and pads of notepaper. In particular, the packaged article may consist of a number of individual similar or dissimilar items which are wrapped together to form a "multi-pack".

[0009] For the purpose of the present invention, the phrase 'at least one barrier strip' is intended to mean one or two barrier strips. In this context, the singular ('barrier strip') includes the plural ('barrier strips'), unless expressly stated otherwise.

[0010] In one embodiment of the invention, the film is provided with one barrier strip adjacent to the tear tape.

[0011] In another embodiment of the invention, the film is provided with two barrier strips adjacent to the tear tape, one on either side of said tape. In use, when the consumer pulls on the tear tape the path along which the film tears follows the line of the tear tape since it cannot cross the barrier strips on either side thereof. The provision of two barrier strips thus creates a predictable, predefined path along which the film packaging material is torn or separated when the consumer opens the wrapper.

[0012] The tear tape and/or the barrier strip may be embedded in the film or may be affixed to the surface thereof by means of, for example, a hot melt wax composition or other suitable adhesive.

[0013] Where the tear tape and the barrier strip are affixed to a surface of the film packaging material, preferably they are adhered thereto by means of a suitable self-adhesive composition, more preferably a pressure sensitive self-adhesive composition, optionally in combination with a primer. Suitable compositions and primers are known in the art and commercially available. The use of a pressure sensitive self-adhesive composition advantageously avoids the need for additional materials (such as glue and/or solvents) to affix the tear tape and/or the barrier strip to the film.

[0014] Preferably, the tear tape and the barrier strip are affixed to opposite sides or faces of the film packaging material. More preferably, to enhance the controlling effect of the barrier strip, the tear tape is affixed to the surface of the film that, in use, forms the inner surface of the wrapper and the barrier strip is affixed to the surface of the film that, in use, forms the outer surface of the wrapper.

[0015] The film is chosen such as to meet the specific wrapping requirements for the packaged article and may be made from any suitable packaging material, preferably from a suitable thermoplastic or other polymeric material, more preferably from polyolefin packaging materials. For example, the film may comprise polypropylene, polyethylene, and/or other suitable polyolefins, including copolymers of such polyolefins. It may also comprise cel-

lulose or cellulose derivatives. Preferably, the film packaging material is a thin and transparent plastic film. The film may, for example, have a thickness of from about 10 microns to about 200 microns. The film may be monoaxially or biaxially oriented. Advantageously, the film is heat-shrinkable.

[0016] The tear tape and/or the barrier strip may be made from suitable materials known in the art, for example, from conventional tear tape materials, such as biaxially oriented poly(ethylene terephthalate)(PET)film or monoaxially oriented polypropylene or ethylene/propylene copolymer film. Suitable film materials may comprise, for example, cellulose, cellulose derivatives, polyvinyl chloride, vinyl chloride copolymers, linear polyesters and/or polyolefins such as polypropylene, polyethylene or copolymers thereof. Materials suitable for use as the tear tape and/or the barrier strip of the film packaging material of the present invention are disclosed, for example, in lines 21-54 of column 2 of US-B1-6 209 606. Preferably, the tear tape and the barrier strip are made from similar materials, more preferably from the same material.

[0017] Preferably, the tear tape and the barrier strip also have similar dimensions, more preferably, the same dimensions. Preferably, the width of the tear tape and/or the barrier strip is between about 1 mm and about 5 mm, more preferably between about 1.5 mm and about 4 mm, most preferably between about 1.7 mm and about 2 mm.

[0018] Preferably the tear tape and the barrier strip are aligned parallel to one another. It will be appreciated, however, that the tear tape and the barrier strip may be positioned at an angle relative to one another if desired. Preferably, the spacing between the tear tape and the barrier strip is between about 0.5 mm and about 5 mm, more preferably between about 1mm and about 4 mm, most preferably between about 1.5 mm and about 3 mm.

[0019] Preferably, the wrapper further comprises a single pull tab at one end of the tear tape. The provision of a single pull tab facilitates opening of the wrapper by the consumer, but discourages accidental removal of the barrier strip.

[0020] If desired, the tear tape and/or the barrier strip may be printed.

[0021] If desired, the color of the tear tape may be different to that of the film packaging material so that the consumer can readily identify the tear tape, which must be pulled in order to open the wrapper. Furthermore, to enable the consumer to easily distinguish the tear tape from the adjacent barrier strip, the color of the tear tape may be different from that of the barrier strip. In one embodiment of the invention, the color of the barrier strip is the same or very similar to that of the film packaging material so that the barrier strip is essentially invisible to the consumer. It will be appreciated, however, that the colour of the barrier strip may be different to that of the film packaging material and/or that the tear tape and the barrier strip may be substantially the same colour if desired.

[0022] Known apparatus and methods suitable for applying the tear tape to the surface of film packaging materials may be employed in the production of film packaging materials and wrappers of packaged articles according to the invention. For example, unwinding units or dispensers, such as those described in US-B1-6 209 606 and EP-A1-0 121 371, may be used to apply the tear tape and the barrier strip coated with a pressure sensitive adhesive from reels to opposite sides of a continuous web of the film packaging material, which is then cut into separate sheets in a known manner.

[0023] The invention is further illustrated, by way of example only, with reference to the following figure.

[0024] Figure 1 shows a top plan view of a wrapper 2 for a packaged article according to the present invention. The wrapper 2 comprises a sheet of film packaging material having a horizontal tear tape 4 affixed to the upper surface thereof. The tear tape 4 extends across the sheet of film packaging material, dividing the wrapper into two sections of unequal size, a smaller upper section 6 and a larger lower section 8. A U-shaped pull tab 10 and a corresponding U-shaped cut-out 12 are cut into the sheet of film packaging material at opposite ends of the tear tape 4.

[0025] A first barrier strip 14, which extends across the sheet parallel to the tear tape 4, is affixed to the lower surface of the sheet of film packaging material in the smaller upper section 6 thereof. A second barrier strip 16, which also extends across the sheet parallel to the tear tape 4, is affixed to the lower surface of the sheet of film packaging material in the larger lower section 8 thereof. In the wrapper 2 shown in Figure 1, the first barrier strip 14 and the second barrier strip 16 are spaced at an equal distance from the tear tape 4.

[0026] In a preferred embodiment of the invention, a conventional rectangular hinge-lid cigarette pack is wrapped in a transparent, colorless wrapper of heat-shrinkable film packaging material having a colored tear tape affixed to the inner surface thereof. The tear tape extends horizontally across the film packaging material such that the wrapper is divided into two sections of unequal size, a smaller upper section and a larger lower section. A transparent, colorless barrier strip, which is made of the same material as the tear tape and is parallel thereto, is affixed to the outer surface of the film packaging material in the upper section of the wrapper. A folded coupon or leaflet is adhered by a horizontal line of adhesive to the inner surface of the film packaging material in the upper portion of the wrapper above the barrier strip.

[0027] In use, the presence of the barrier strip enables the consumer to remove the upper section of the wrapper together with the coupon or leaflet when opening the wrapper.

Claims

1. A packaged article having a wrapper (2) wherein the

wrapper comprises a film packaging material provided with a tear tape (4), **characterized in that** the film packaging material is further provided with at least one barrier strip (14, 16) adjacent to the tear tape (4) .

2. The packaged article according to claim 1 wherein the film packaging material is provided with two barrier strips (14, 16), one on either side of the tear tape (4).
3. The packaged article according to claim 1 or 2 wherein the tear tape (4) and the at least one barrier strip (14, 16) are affixed to the surface of the film packaging material.
4. The packaged article according to claim 3 wherein the tear tape (4) and the at least one barrier strip (14, 16) are adhered to the surface of the film packaging material by a pressure sensitive self-adhesive composition.
5. The packaged article according to claim 3 or 4 wherein the tear tape (4) and the at least one barrier strip (14, 16) are affixed to opposite sides of the film packaging material.
6. The packaged article according to claim 5 wherein the tear tape (4) is affixed to the inner surface of the wrapper.
7. The packaged article according to any preceding claim wherein the wrapper further comprises a single pull tab (10) at one end of the tear tape (4).
8. The packaged article according to any preceding claim wherein the tear tape is a different color to the at least one barrier strip.
9. The packaged article according to any preceding claim wherein the film packaging material is substantially the same color as the at least one barrier strip.
10. The packaged article according to any preceding claim wherein the tear tape (4) and the at least one barrier strip (14, 16) are made from substantially the same material.
11. The packaged article according to any preceding claim wherein the tear tape (4) and barrier strip(s) (14, 16) are substantially parallel.
12. The packaged article according to any preceding claim wherein the spacing between the tear tape (4) and the at least one barrier strip (14, 16) is between 0.5 mm and 5 mm.
13. The packaged article according to any preceding

claim which is a cigarette pack or a carton comprising a plurality of cigarette packs according to any preceding claim.

- 5 14. The cigarette pack according to claim 13 wherein a leaflet or coupon is provided on the outer surface of the pack, beneath the wrapper.
- 10 15. The cigarette pack according to claim 14 wherein the leaflet or coupon is affixed to the film packaging material.
- 15 16. A film comprising a tear tape **characterised in that** it further comprises at least one barrier strip adjacent to the tear tape.
- 20 17. The film according to claim 16 comprising two barrier strips adjacent to the tear tape, one on either side thereof.
- 25 18. A process for manufacturing a wrapper (2) for an article comprising:

affixing a tear tape (4) to a film packaging material; and
affixing a first barrier strip (14, 16) to the film packaging material adjacent to the tear tape (4).
- 30 19. The process according to claim 18 further comprising:

affixing a second barrier strip (16, 14) to the film packaging material adjacent to the tear tape (4), on the opposite side of the tear tape (4) to the first barrier strip (14, 16).
- 35 20. The process according to claim 18 or 19 comprising:

affixing the tear tape (4) and the barrier strip(s) (14, 16) to opposite sides of the film packaging material.
- 40
- 45
- 50
- 55

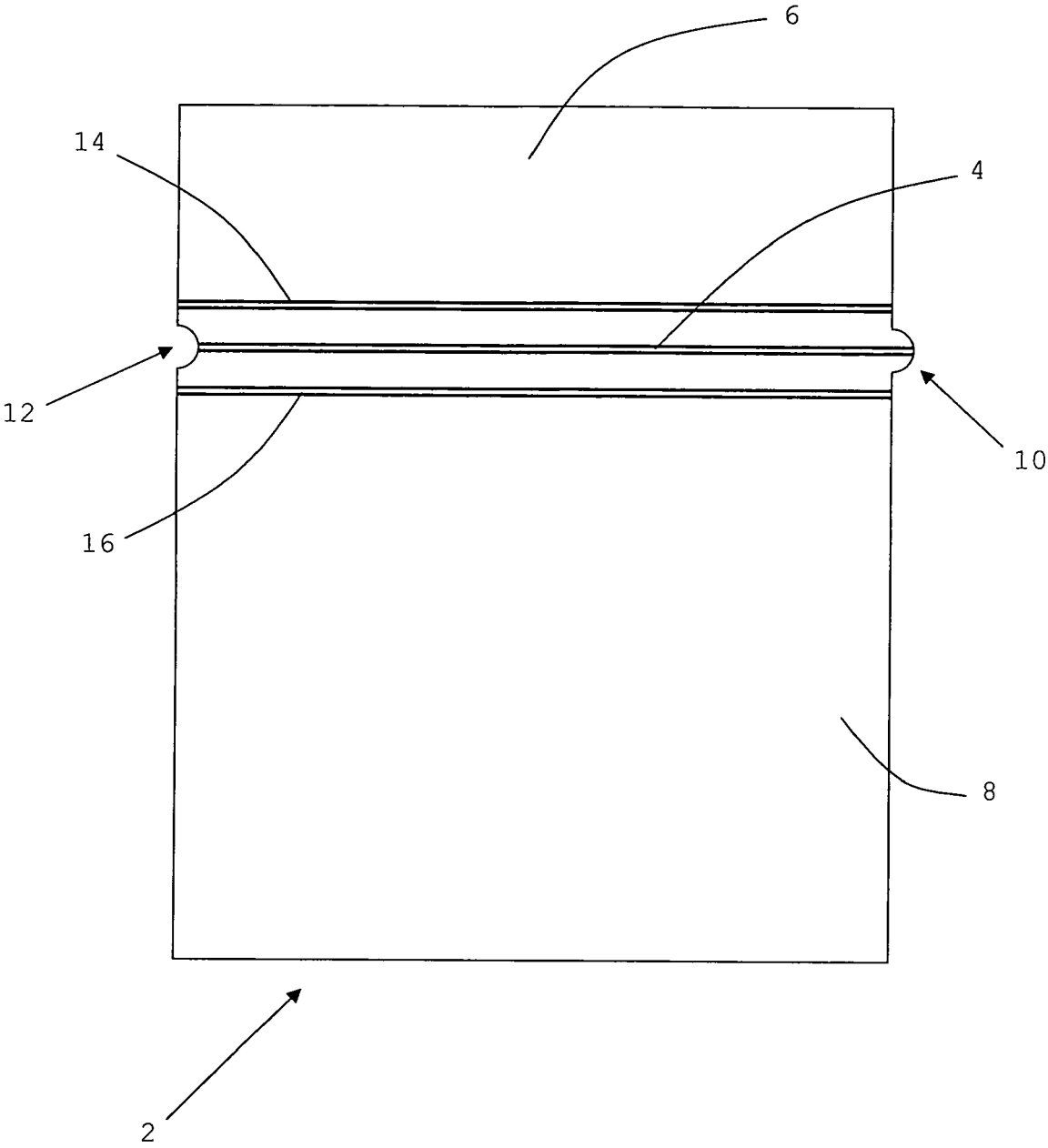


Figure 1



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 04 02 8423

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.7)
X	GB 1 013 783 A (B. X. PLASTICS LIMITED) 22 December 1965 (1965-12-22)	1-6, 10-12, 16-20	B65D75/66 B65D85/10
Y	* page 2, line 87 - line 114; figures 2-4 *	13-15	
X	----- US 5 035 328 A (KIM ET AL) 30 July 1991 (1991-07-30) * column 2, line 15 - line 62; figure 1 *	1-7, 10-12, 16-20	
X	----- FR 1 277 004 A (ZAVODY V. I. LENINA PLZEN NARODNI PODNIK) 24 November 1961 (1961-11-24) * page 2, column 2, paragraph 2 * * page 2, column 2, paragraph 4 *	1,3, 7-13,16, 18	
X	----- US 3 088 379 A (DICKINSON BARRY L ET AL) 7 May 1963 (1963-05-07) * column 4, line 65 - line 70; figure 3 *	1-4,10, 11,16-19	
X	----- DE 89 07 723 U1 (HOECHST AG, 6230 FRANKFURT, DE) 10 August 1989 (1989-08-10) * page 6, line 7 - page 7, line 7; figures 2,3 *	1-3,6,7, 9,11,12, 16-19	TECHNICAL FIELDS SEARCHED (Int.Cl.7) B65D
Y	----- EP 1 312 564 A (PHILIP MORRIS PRODUCTS S.A) 21 May 2003 (2003-05-21) * abstract; figures 1-3 *	13-15	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 8 April 2005	Examiner Appelt, L
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	

1
EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 04 02 8423

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

08-04-2005

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
GB 1013783	A	22-12-1965	NONE	
US 5035328	A	30-07-1991	NONE	
FR 1277004	A	24-11-1961	US 3090541 A	21-05-1963
US 3088379	A	07-05-1963	CH 365276 A	31-10-1962
			FR 1237588 A	29-07-1960
			GB 923899 A	18-04-1963
DE 8907723	U1	10-08-1989	NONE	
EP 1312564	A	21-05-2003	EP 1312564 A1	21-05-2003
			AU 2002336880 A1	10-06-2003
			BR 0214267 A	21-09-2004
			WO 03043910 A1	30-05-2003
			EP 1446337 A1	18-08-2004