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(54) LAMINATED WRAPPER FOR TOBACCO PRODUCTS

(57) The present invention relates to a smoking article with a distal and a proximal end and extending in a longitudinal direction. The smoking article comprises a longitudinal axis, along which at least one tobacco segment comprising tobacco and at least one filter segment comprising at least one or more parts are arranged, wherein the tobacco segment and/or the filter segment is/are surrounded by a wrapper. The wrapper has a basis weight between 10 g/m2 and 80 g/m2 and comprises a laminate of at least an outer first layer, an inner second layer and a glue layer, wherein a porosity of the first layer is lower than a porosity of the second layer. The present invention further relates to a method of producing the wrapper, comprising the steps of: a) Providing the first and second layer, wherein a porosity of the first layer is lower than a porosity of the second layer, b) applying a partial or full layer of glue on the first and/or second layer, and c) attaching the first and the second layer on one another.

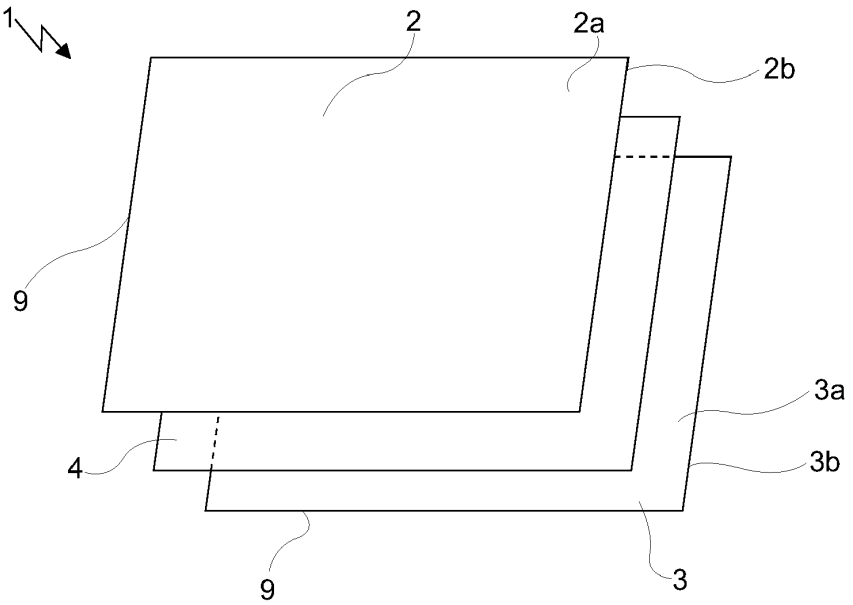

Fig. 1a

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Description

[0001] The present invention relates to a smoking article with a tobacco segment, at least one filter segment, which are surrounded by a wrapper, which has a basis weight between 10 g/m2 and 80 g/m2 and comprises a laminate of at least an outer first layer, an inner second layer and a glue layer. A porosity of the first layer is lower than a porosity of the second layer. The present invention further relates to a method of producing the wrapper, comprising the steps of: a) Providing the first and second layer, wherein a porosity of the first layer is lower than a porosity of the second layer, b) applying a partial or full layer of glue on the first and/or second layer, and c) attaching the first and the second layer on one another.

[0002] Tobacco products such as conventional cigarettes, heat not burn tobacco products such as sticks or other reduced risk products are typically wrapped by cellulose based thin paper material, so called cigarette paper. Those cigarette papers typically have different technical functions, which are all related to the smoking of the tobacco product, which is in general surrounded by the cigarette paper.

[0003] One of those functions to provide a mechanical protection of the smoking product against mechanical stress, such as bending or breaking. Another function is to keep the smoking product in shape so that it is protected against deformation and to prevent the tobacco particles from falling out of the products as well as to guarantee that the tobacco particles are close enough that they are able to ignite each other during consumption. Moreover, the cigarette paper needs to be combustible such that it can be burned in a time span corresponding to the combustion time of the tobacco of the smoking article.

[0004] However, mostly small Spot & Stain can appear on the surface of the cigarette paper during production, storage and/or transportation of the smoking products. In particular those products, which are highly aromatized or contain a large amount of additional flavors are affected by Spot & Stain. Spot & Stain spoil the tobacco products visual quality and is therefore desired to avoid from consumer perspective.

[0005] One technique to suppress such Spot & Stain is to double the cigarette paper or rather to wrap smoking products with two cigarette papers. With this technique it is tried to avoid that a liquid substance diffuses through two cigarette papers to avoid the formation of spots on the visible surface of the outer paper. Unfortunately, additional bobbin feeding equipment for another paper must be equipped on each tobacco rod production machine to produce a double wrapped smoking product. This leads to a very high production effort and high machinery costs.

[0006] It is therefore the objective of the invention to provide a smoking product, which is protected against spot and stain and at the same time can easily and cheaply be produced with little expense.

[0007] The afore-mentioned problems are eliminated by a smoking article with a distal and a proximal end and extending in a longitudinal direction. The smoking article comprises a longitudinal axis, along which at least one tobacco segment comprising tobacco and at least one filter segment comprising at least one or more parts are arranged, wherein the tobacco segment and/or the filter segment is/are surrounded by a wrapper. The wrapper has a basis weight between 10 g/m^2 and 80 g/m^2 and comprises a laminate of at least an outer first layer, an inner second layer and a glue layer, wherein a porosity of the first layer is lower than a porosity of the second layer.

[0008] The smoking article may be usable as a combustible and/or Heat-not-Burn article and/or is able to be used in combination with an electronic smoking device. While the basis weight of the wrapper leads to a stiffness, which is sufficient to protect the smoking article against mechanical stress, the wrapper ideally consists of one piece so that no additional bobbin feeding equipment is necessary to produce the smoking article.

[0009] If the basis weight would be too high, e.g. above 100 g/m^2, the CO value released due to combustion will rise. A very low basis weight, e.g. below 10 g/m^2 would cause a loss of optical properties and moreover leads to a reduced machine runability.

[0010] Ideally, the first and second layer have the same or at least similar dimensions such that they are adjoinable on top of each other and preferably without protrusions. Under similar dimensions are to be understood dimensions which do not deviate more from each other than 10%. Further, layers of the wrapper are preferably arranged such that the second layer contacts the tobacco segment and/or the filter segment so that the smoking article have a familiar appearance to the consumer and/or can be branded or printed due to sufficient optical properties of the first layer.

[0011] Preferably, the filter segment may comprise at least one, preferably two or more filter parts. Ideally, the filter segment comprises a hollow and in particular a tubular filter part and/or a filled filter part. At least one or both parts comprise or are made of cellulose material, preferably cellulose acetate. The filter segment may comprise a recess filter or a filled filter part and a cavity to provide a cooling effect of the hot smoke. Such a construction with cooling and filter effects guarantees that the hot smoke cools down before it reaches a mouth of a consumer. Moreover, materials which are needed for the production of separate paper tubes can be saved so that the overall production costs are reduced.

[0012] Preferably, the tobacco segment comprises tobacco leafs, tobacco pulp, tobacco extract, tobacco oil, cured tobacco, finely cut tobacco leaves, reconstituted tobacco and/or homogenized tobacco or combinations thereof. The tobacco of the tobacco segment may further contain essentially at least one sort of tobacco, preferred a blend of at least two or more different sorts of tobacco. With a blend of different sorts of tobacco the taste is adjustable and can be adjusted to a preferred taste of the

consumer.

[0013] It is further conceivable that a porosity of the wrapper is higher than 1 CU (Coresta Unit), preferably higher than 3 CU, preferably higher than 5 CU and/or lower than 200 CU, preferably lower than 150 CU, preferably lower than 100 CU. Preferably, the porosity of the wrapper is higher than 15 CU and lower than 100 CU. Such porosity provides sufficient optical properties to provide a familiar look of the smoking article and/or the wrapper and moreover, ideally releases only little smoke chemicals like CO during consumption.

[0014] According to a preferred embodiment, the weight of the wrapper is higher than 10 g/m^2, preferably higher than 20 g/m^2, preferably higher than 30 g/m^2 and/or lower than 100 g/m^2, preferably lower than 90 g/m^2, preferably lower than 80 g/m^2. Preferably, the weight of the wrapper is higher than 30 g/m^2 and lower than 60 g/m^2. Such basis weight prevents the formation of Spot & Stain, while at the same time it provides a sufficient machine runability and combustibility of the smoking article and/or the wrapper.

[0015] In a preferred embodiment, the porosity of the first layer is higher than 5 CU, preferably higher than 10 CU, preferably higher than 15 CU and/or lower than 500 CU, preferably lower than 300 CU, preferably lower than 150 CU. Such porosity provides a protection of the smoking article against spot and stain so that a good appearance is guaranteed. It further reduces the risk the first layer sucks liquid substances e.g. oil or flavors that may diffuse from the tobacco and/or other parts of the smoking article into the first layer to form spots. Moreover, due to such porosity the first layer is still able to adsorb printing substances so that the first layer is printable and/or brandable with e.g. consumer information.

[0016] In a preferred embodiment, the porosity of the second layer is higher than 500 CU, preferably higher than 1000 CU, preferably higher than 2500 CU and/or lower than 70000 CU, preferably lower than 60000 CU, preferably lower than 50000 CU. Such porosity provides capillaries that are large enough not to generate a capillary effect that causes liquid substances such as oil or flavors and prevents them or at least hinder them to enter the pores of the second layer. Therefore the porosity of the second layer leads to a sufficient preventability of the second layer related to liquid substances, which are released from e.g. tobacco.

[0017] In a further preferred embodiment, a weight of the first layer is higher than a weight of the second layer. If the weight and therefore also the porosity of the first layer differs from that of the second layer, there is formed a diffusion gradient for liquid substances through the first and second layer. Moreover, due to this gradient, there is preferably formed a diffusion barrier within the wrapper. As the weight of the first layer is higher than that of the second layer, a diffusion of liquid substances through the second layer and into the first layer is prevented or at least hindered.

[0018] In another preferred embodiment, the weight and/or grammage of the first layer is higher than 5 g/m^2, preferably higher than 10 g/m^2, preferably higher than 20 g/m^2 and/or lower than 70 g/m^2, preferably lower than 60 g/m^2, preferably lower than 50 g/m^2. This weight provides a good protection of the smoking article against mechanical stress. A lower weight would lead to fragile covering of the smoking article and may also to lead to the risk that spots can appear. Moreover, a higher weight may lead to a less favorable machine runability or behavior of the wrapper during production and/or to a worse combustibility.

[0019] Another preferred embodiment, a weight and/or grammage of the second layer is higher than 2 g/m^2, preferably higher than 5 g/m^2, preferably higher than 10 g/m^2 and/or lower than 40 g/m^2, preferably lower than 30 g/m^2, preferably lower than 20 g/m^2. Preferably, the weight of the second layer is higher than 10 g/m^2 and lower than 20 g/m^2. A weight higher than 40 g/m^2 may lead to a less favorable rigidness of the second layer and probably negative impact on smoking taste and chemicals like CO during consumption. A lower weight than 2 g/m^2 may lead to very bad processability and machine run-ability of the second layer.

[0020] In a preferred embodiment, the glue layer is positioned at least section wise between the first and second layer and/or is formed as a full or partial layer, wherein a partial glue layer comprises a pattern. A full layer or rather an entire area of glue prevents wrinkling of one of the layers of the wrapper during wrapping of the smoking article. With a partial layer material can be saved in the production of the wrapper. Ideally, the glue is formed as partial layer, which is extended over a whole contact area of the first and second layer so that wrinkling can be avoided and the production costs can be kept at a low level. A glue of the glue layer may also be distributed linear or punctiformly over a partial or an entire surface of the first and/or second layer or rather a partial or entire area between the first and second layer.

[0021] In another preferred embodiment, the partial glue layer comprises a pattern. Ideally, the pattern comprises a grid or is striped, checkered and/or dotted. The pattern may also comprise any other geometric and/or constant and repetitive pattern, e.g. a honeycomb or mesh structure that can be easily applied to the first and/or second layer. Ideally, the pattern comprises a mesh or grid structure, which is preferably made up of two groups of lines and/or differently oriented lines of glue, that are preferably arranged in parallel and in particular such to form voids between the lines. The pattern may comprise a combination of two or more lined and/or dotted patterns, wherein the lines and/or dots of the patterns may have different orientations and/or dimensions. This guarantees a constant pattern throughout an entire extension of the partial glue layer.

[0022] Preferably, each line has a thickness larger than 0.1 mm, preferably larger than 0.2 mm, preferably larger than 0.5 mm and/or smaller than 2 mm, preferably smaller than 1.5 mm, preferably smaller than 1 mm. Preferably,

each void between the glue lines has a width larger than 0.5 mm, preferably larger than 0.8 mm, preferably larger than 1 mm and/or smaller than 6 mm, preferably smaller than 5 mm, preferably smaller than 4 mm.

[0023] In a preferred embodiment, the first and second layer are attached to one another with the glue layer. The glue layer preferably guarantees that the first and second layer can be handled as single wrapper during processing and production of the smoking article. The glue layer fixes the first and second layer to one another so that the first and second layer are non-slidable with respect to each other. Preferably, the glue is made of a thermoplastic and/or is flexible in a solid state to avoid a brittle behavior of the wrapper. It is further beneficial that the glue is odorless and/or tasteless to avoid any effect of the glue to the taste of the smoking article.

[0024] In a preferred embodiment, the glue comprises a substance selected from a group of polyvinyl ester, preferably at least one vinyl acetate, preferably polyvinyl acetate and/or ethylene-vinyl acetate. Those glues are odorless and tasteless so that the glue does not have any effect on the smoking. Further, in particular polyvinyl acetate and/or ethylene-vinyl acetate are preferably used to keep the wrapper flexible after their solidification.

[0025] In a preferred embodiment, an amount of glue between the first and second layer is larger than 0,5 g/m^2, preferably larger than 1 g/m^2, preferably larger than 1.5 g/m^2 and/or smaller than 4 g/m^2, preferably smaller than 3.5 g/m^2, preferably smaller than 3 g/m^2. Such amount is an optimum to save production costs and at the same time to provide a good fixation of the first and second layer and to allow sufficient gas transfer through the wrapper. Further, a density of the glue is higher than 0.8 g/m3, preferably higher than 0.9 g/m3, preferably higher than 1 g/m3 and/or lower than 2 g/m3, preferably lower than 1.5 g/m3, preferably lower than 1.3 g/m3.

[0026] In a preferred embodiment, a gluing area between the first and second layer is higher than 10%, preferably higher than 15%, preferably higher than 20% of a total area of wrapper and/or lower than 50%, preferably lower than 40%, preferably lower than 35% of the total area of the wrapper. With less than 50% of the total area being glued, there is enough space to ensure a sufficient ventilation through the wrapper and between e.g. the tobacco segment or rather an inside and an outside of the smoking article.

[0027] In a preferred embodiment, a strength of the glue of the wrapper, which was determined by a scott bond test according to European Norm ISO 16260:2016, is higher than 100 J/m2, preferably higher than 150 J/m2, preferably higher than 200 J/m2 and/or lower than 1000 J/m2, preferably lower than 800 J/m2, preferably lower than 600 J/m2. Preferably, such strength is sufficiently enough to avoid a release of the fixation of the first and second layer during processing and production of the wrapper and the smoking article.

[0028] In a preferred embodiment, an opacity of the first layer is higher than an opacity of the second layer. As the first layer with its higher opacity is arranged and directed to an external environment of the smoking article, the first layer provides a good and for consumers familiar appearance.

[0029] In a preferred embodiment, the opacity of the first layer is higher than 40%, preferably higher than 50%, preferably than 60% and/or lower than 100%, preferably lower than 95%, preferably lower than 90%. Such opacity is well suitable to hide Spot and & Stain as well as to provide a good and familiar appearance to the consumer. Further, the first layer is able to be branded, wherein the appearance of the brands may not be affected by spots due to a high opacity of the first layer. Moreover, an opacity less than 40% may not be able to hide spots.

[0030] In a preferred embodiment, the first and/or second layer consists of or comprises a paper material. Paper material provides well known and suitable burning properties that guarantee a sufficient combustion of the first and/or second layer during consumption of the smoking article.

[0031] The objective is also reached by a wrapper for a combustible smoking product and/or a Heat not Burn product, wherein the wrapper extends in longitudinal direction and in a width direction and comprises a paper based material, which is rollable. The wrapper has a basis weight between 10 g/m^2 and 80 g/m^2 and comprises a laminate of at least an outer first layer, an inner second layer and a glue layer, wherein a porosity of the first layer is lower than a porosity of the second layer. While the basis weight of the wrapper leads to a stiffness, which is sufficient to protect a smoking article against mechanical stress, the wrapper ideally consists of one piece so that no additional bobbin feeding equipment is necessary to produce the smoking article.

[0032] In a preferred embodiment, a porosity of the wrapper is higher than 5 CU, preferably higher than 10 CU, preferably higher than 15 CU and/or lower than 200 CU, preferably lower than 150 CU, preferably lower than 100 CU. Such porosity provides sufficient optical properties to provide a familiar look of the smoking article and/or the wrapper and moreover, ideally releases only little smoke chemicals like CO during consumption.

[0033] In a preferred embodiment, the wrapper, the first layer, the second layer and/or the glue layer have properties as described above so that the wrapper provides the aforementioned benefits.

[0034] The objective is also reached by a method of producing a laminated wrapper to suppress spots and stains on a smoking article with a distal and a proximal end and extending in a longitudinal direction, wherein the smoking article comprises a longitudinal axis, along which at least one tobacco segment comprising tobacco and at least one filter segment comprising at least one or more parts are arranged, wherein the tobacco segment and/or the filter segment is/are surrounded by the wrapper, which has a basis weight between 10 g/m^2 and 80 g/m^2 and comprises a laminate of at least an outer first layer and an inner second layer, comprising the steps

of:

a. Providing the first and second layer, wherein a porosity of the first layer is lower than a porosity of the second layer,
b. Applying a partial or full layer of glue on the first and/or second layer,
c. Attaching the first and the second layer on one another.

[0035] In a first step, the first layer and the second layer are provided. Ideally, the first layer and the second layer have properties as described above so that the layers provide the aforementioned benefits. Further, the tobacco segment and the filter segment are provided. Preferably, the at least one part of the smoking article is formed according to the description above so that the tobacco segment, the filter segment, the first layer and/or the second layer are characterized by the aforementioned benefits and/or properties.

[0036] In a next step, in particular a second step, a layer of glue is applied on the first and/or second layer. Ideally, the glue is applied, especially in a liquid state, onto the first layer. The layer of glue may be applied by a roller, nozzle or brush. Preferably the glue is applied by stamping or printing and especially using a stamp that may have a cylindrical or rectangular shape. The glue layer may be formed as a full or in particular a partial layer as described above to keep production costs at a low level, to provide a sufficient amount of glue and enable a good fixation of the first and second layer without the aforementioned disadvantages. A pattern of the stamp ideally corresponds to a pattern of the partial glue layer so that a consistent pattern on the first and/or second layer can be realized.

[0037] In a next step, in particular an intermediate step, the glue is dried and/or cooled (a bit). Preferably, the glue is dried from a state with a low viscosity until the glue has a higher viscosity than before drying. Further, the glue may be dried until its adhesion is higher than before drying and in particular the glue is dried until the glue is not solidified completely.

[0038] In a next step, in particular a third step, the first layer is attached to the second layer such that the layer of glue is positioned between the first and the second layer and in particular such that an inner surface of the first layer corresponds to an opposing inner surface of the second layer. Preferably, the inner surface of the first layer is arranged coplanar to the opposing inner surface of the second layer. With the glue layer, the first and second layers are fixed to one another so that wrapper comprising the first and second layer can be processed and handled as a single wrapper, and in particular without a need of additional bobbin feeding equipments.

[0039] Further advantages, objectives and features of the present invention will be described, by way of example only, in the following description with reference to the appended figures. In the figures, like components in different embodiments can exhibit the same reference symbols.

[0040] The figures show:

Fig. 1 a, b Schematic views of a wrapper and its different layers.

[0041] In Figure 1a a wrapper 1 with an outer first layer 2 and an inner second layer 3 is shown. There is a full layer of glue 4 positioned between the first 2 and the second 3 layer. Preferably, the first layer 2 and/or the second layer 3 comprise a paper material. In particular both, the first 2 and the second 3 layer are made of paper material. The wrapper 1, and in particular the combination of the first 2 and second layer 3 may have a basis weight between 10 g/m^2 and 80 g/m^2 and preferably between 30 g/m^2 and 60 g/m^2. Further, the wrapper 1, and in particular the combination of the first 2 and second layer 3 may have a porosity of between 5 CU and 100 CU and preferably between 15 CU and 100 CU. The wrapper 1 may therefore made of a laminate of the first 2 and second 3 layer and in particular may be made of a laminated paper material.

[0042] The second layer 3 may be an inner layer, which is preferably directed to an interior of a smoking article and/or to tobacco of tobacco rod and/or to a filter segment. The second layer 3 may further comprise an inner 3a and an outer surface 3b (with respect to the layer of glue 4). Ideally, a weight of the second layer 3 is between 10 g/m^2 and 20 g/m^2. Preferably, a porosity of the second layer 3 is between 500 CU and 50000 CU and in particular between 5000 CU and 40000 CU.

[0043] The first layer 2 may be an outer layer, which is preferably directed to an external environment of a smoking article. The first layer 2 may further comprise an inner 2b and an outer surface 2a (with respect to the layer of glue 4). Ideally, a weight of the first layer 2 is between 20 g/m^2 and 40 g/m^2 and preferably between 25 g/m^2 and 30 g/m^2. Preferably, a porosity of the first layer 2 is between 5 CU and 150 CU and preferably between 20 CU and 120 CU with a resulting preferred opacity of between 40% and 90% and in particular between 60% and 90%.

[0044] Ideally, the first 2 and second 3 layer are arranged in parallel and in particular coplanar to one another such that edges 9 of the first 2 and second 3 layer are arranged one above the other to form common edges 9 of the wrapper 1. Preferably, a full glue layer 4 comprises glue that is distributed over a whole area between the first 2 and second 3 layer so that ideally the glue layer extends over a whole inner surface 2b, 3a of the first 2 and/or second layer 3. The glue may be positioned between the inner surface 2b of the first layer 2 and the inner surface 3a of the second layer 3, wherein the inner surface 2b of the first layer 2 preferably opposes and/or faces the inner surface 3a of the second layer 3.

[0045] Further and optionally, the outer surface 3b of the second layer 3 may be directed to a tobacco segment

and/or a filter segment of a smoking article. Moreover, the outer surface 2a of the first layer 2 may be directed to an external environment of the smoking article. In any case, the outer surface 2a of the first layer 2 is preferably directed to an opposing direction to which the outer surface 3b of the second layer 3 is directed.

[0046] In Figure 1b a wrapper 1 with an outer first layer 2 and an inner second layer 3 is shown. Both layers have the same properties as described in figure 1a and/or are arranged similar to the description of figure 1a. A partial glue layer 5 is preferably positioned between the first 2 and the second 3 layer, and in particular between the inner surfaces 2b, 3a of the first 2 and the second 3 layer. The partial glue layer 5 further extends over a whole inner surface 2b, 3a of the first 2 and/or second layer 3. An amount of the glue of the partial glue layer 5 is preferably between 0.5 g/m^2 and 4 g/m^2 and in particular between 1.5 g/m^2 and 3 g/m^2.

[0047] The partial glue layer 5 preferably comprises a pattern, which preferably comprises a checkered pattern comprising glue lines 6 and voids 7 that are ideally positioned between the glue lines 6. The voids 7 may be shaped rectangular or rhomboidal and/or are arranged singular and in particular such that the voids 7 are not connected. Each void has at least one, preferably two sides with a width between 0.5 mm and 6 mm, preferably between 0.9 mm and 4.5 mm, preferably at least one or two sides with a width of exactly 0.9 mm and/or 4.5 mm.

[0048] Preferably, the pattern comprises at least two groups of glue lines 6, wherein the groups of glue lines are oriented angled to each other to form a grid. Preferably that angle is larger than 30°, preferably larger than 40°, preferably larger than 50° and/or smaller than 91°, preferably smaller than 80°, preferably smaller than 70°. Therefore, each line 6 may be arranged angled to at least one, preferably more than one other line 6.

[0049] Each line 6 may have a thickness between 0.1 mm and 1.1 mm and preferably between 0.2 and 1 mm and in particular exactly 0.2 mm or 1 mm. It may be possible that lines 6 of one group have a thickness between 0.1 mm and 0.5 mm, while lines of the other group have a thickness between 0.5 mm and 1.1 mm. It may also be possible that the thickness of the lines 6 is 90% smaller, preferably 70% smaller, preferably 50% smaller than at least one side of the voids 7. Lines 6 of one group may be arranged in parallel, wherein a distance of the lines 6 of one group ideally corresponds to the width of at least one side of the voids 7.

[0050] The applicant reserves his right to claim all features disclosed in the application document as being an essential feature of the invention, as long as they are new, individually or in combination, in view of the prior art. Furthermore, it is noted that in the figures features are described, which can be advantageous individually. Someone skilled in the art will directly recognize that a specific feature being disclosed in a figure can be advantageous also without the adoption of further features from this figure. Furthermore, someone skilled in the art will recognize that advantages can evolve from a combination of diverse features being disclosed in one or various figures.

List of reference symbols

[0051]

1	Wrapper
2	First layer
2a	Outer surface of the first layer
2b	Inner surface of the first layer
3	Second layer
3a	Inner surface of the second layer
3b	Outer surface of the second layer
4	Full layer of glue
5	Partial layer of glue
6	Glue lines
7	Voids between the glue lines
8	Pattern of the glue layer
9	Edges of the wrapper

Claims

1. Smoking article with a distal and a proximal end and extending in a longitudinal direction, wherein the smoking article comprises a longitudinal axis, along which at least one tobacco segment comprising tobacco and at least one filter segment comprising at least one or more parts are arranged, wherein the tobacco segment and/or the filter segment is/are surrounded by a wrapper,
characterized in that
the wrapper has a basis weight between 10 g/m^2 and 80 g/m^2 and comprises a laminate of at least an outer first layer, an inner second layer and a glue layer, wherein a porosity of the first layer is lower than a porosity of the second layer.

2. Smoking article according to claim 1,
characterized in that
the porosity of the first layer is higher than 5 CU, preferably higher than 10 CU, preferably higher than 15 CU and/or lower than 500 CU, preferably lower than 300 CU, preferably lower than 150 CU.

3. Smoking article according to any of previous claims,
characterized in that
the porosity of the second layer is higher than 500 CU, preferably higher than 1000 CU, preferably higher than 2500 CU and/or lower than 70000 CU, preferably lower than 60000 CU, preferably lower than 50000 CU.

4. Smoking article according to any of previous claims,
characterized in that
a weight of the first layer is higher than a weight of

the second layer.

5. Smoking article according to any of previous claims, **characterized in that** a weight of the first layer is higher than 5 g/m^2, preferably higher than 10 g/m^2, preferably higher than 20 g/m^2 and/or lower than 70 g/m^2, preferably lower than 60 g/m^2, preferably lower than 50 g/m^2.

6. Smoking article according to any of previous claims, **characterized in that** a weight of the second layer is higher than 2 g/m^2, preferably higher than 5 g/m^2, preferably higher than 10 g/m^2 and/or lower than 40 g/m^2, preferably lower than 30 g/m^2, preferably lower than 20 g/m^2.

7. Smoking article according to any of previous claims, **characterized in that** the glue layer is positioned at least section wise between the first and second layer and/or is formed as a full or partial layer, wherein a partial glue layer comprises a pattern.

8. Smoking article according to claim 7, **characterized in that** the glue comprises a substance selected from a group of polyvinyl ester, preferably at least one vinyl acetate, preferably polyvinyl acetate and/or ethylene-vinyl acetate.

9. Smoking article according to any of claims 7-8, **characterized in that** an amount of glue between the first and second layer is larger than 0,5 g/m^2, preferably larger than 1 g/m^2, preferably larger than 2 g/m^2 and/or smaller than 7 g/m^2, preferably smaller than 5 g/m^2, preferably smaller than 3 g/m^2.

10. Smoking article according to any of previous claims, **characterized in that** an opacity of the first layer is higher than an opacity of the second layer.

11. Smoking article according to claim 10, **characterized in that** the opacity of the first layer is higher than 40%, preferably higher than 50%, preferably than 60% and/or lower than 100%, preferably lower than 95%, preferably lower than 90%.

12. Smoking article according to any of previous claims, **characterized in that** the first and/or second layer consists of or comprises a paper material.

13. Wrapper for a combustible smoking product and/or a Heat not Burn product, wherein the wrapper extends in longitudinal direction and in a width direction and comprises a paper based material, which is rollable, **characterized in that** the wrapper has a basis weight between 10 g/m^2 and 80 g/m^2 and comprises a laminate of at least an outer first layer, an inner second layer and a glue layer, wherein a porosity of the first layer is lower than a porosity of the second layer.

14. Wrapper according to a claim 13, **characterized in that** a porosity of the wrapper is higher than 5 CU, preferably higher than 10 CU, preferably higher than 15 CU and/or lower than 200 CU, preferably lower than 150 CU, preferably lower than 100 CU.

15. Method of producing a laminated wrapper to suppress spots and stains on a smoking article with a distal and a proximal end and extending in a longitudinal direction, wherein the smoking article comprises a longitudinal axis, along which at least one tobacco segment comprising tobacco and at least one filter segment comprising at least one or more parts are arranged, wherein the tobacco segment and/or the filter segment is/are surrounded by the wrapper, which has a basis weight between 10 g/m^2 and 80 g/m^2 and comprises a laminate of at least an outer first layer, an inner second layer, comprising the steps of:

d. Providing the first and second layer, wherein a porosity of the first layer is lower than a porosity of the second layer,
e. Applying a partial or full layer of glue on the first and/or second layer,
f. Attaching the first and the second layer on one another.

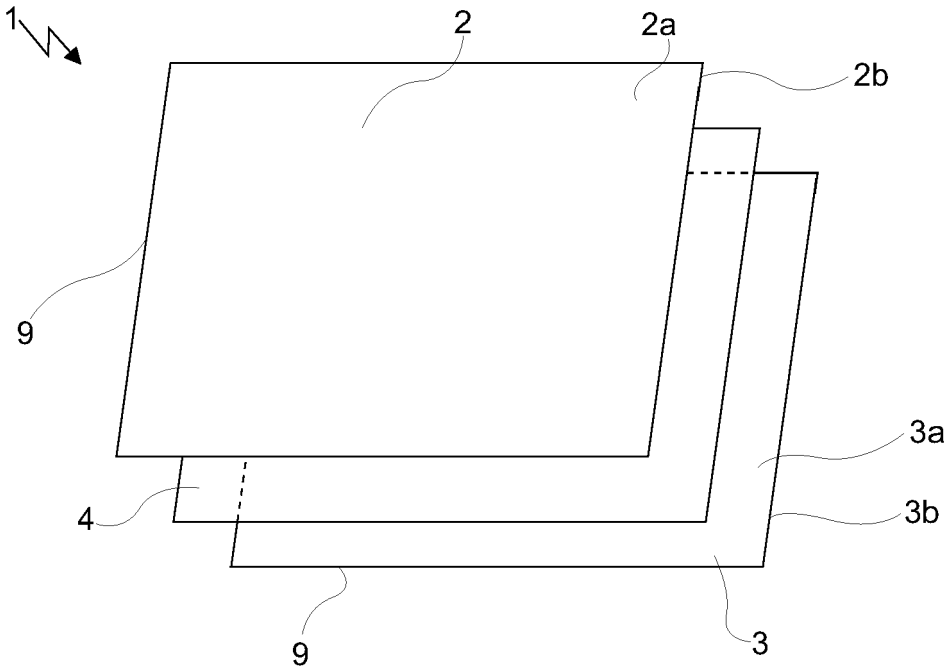

Fig. 1a

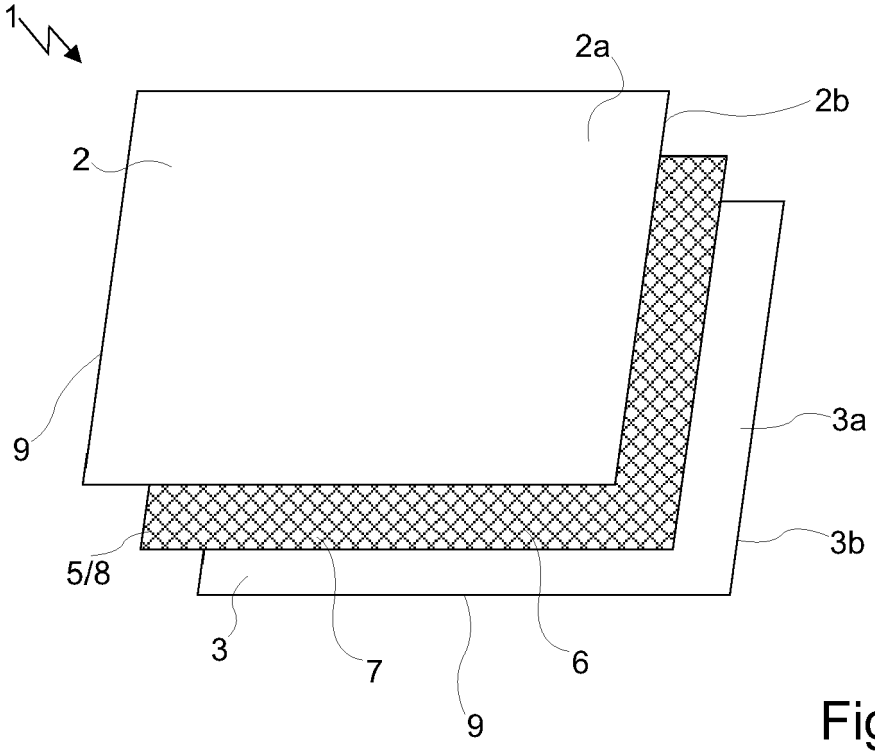

Fig. 1b

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EUROPEAN SEARCH REPORT

Application Number
EP 20 17 9338

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
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