

NON-WOVEN FACE MASK AND CORRESPONDING COSMETIC TREATMENT METHOD.

The present invention concerns a non-woven face mask for applying on a face of a user, comprising:

- a base sheet delimiting a central hole for accommodating a mouth of the user, the base sheet defining a horizontal axis passing through the center of the central hole ;
- a first side attachment element and a second side attachment element for attaching to the ears of a user.

Such a mask is applied on the face of a user, in view of providing a cosmetic treatment to the face of the user. In particular, the mask is intended for applying a cosmetic product on the skin of a user.

The mask is advantageously impregnated with a cosmetic product, such as an anti-aging cosmetic product.

The cosmetic product is for example a gel, a cream, an oil, cosmetic water, a milky lotion or a powder.

A "cosmetic product" is in particular, in the meaning of the present invention, a product such as defined in EC Regulation N°1223/2009 of the European Parliament and of the Council, dated November 30th, 2009, in relation with cosmetic products.

The use of non-woven masks for applying cosmetic product is well-known. Some masks are directly packaged with a cosmetic product impregnating the mask.

Alternatively, dry masks are packaged. The cosmetic product is placed on the mask by the user after opening the packaging of the mask.

In another variation, the cosmetic product is applied directly on the face of a user before applying the mask.

At present, two categories of non-woven masks are available for users.

Classical non-woven masks lay directly on the face and have no mechanical action on the skin. These masks are usually non stretchable and are just applied on the skin of a user, without generating a mechanical forces and or pressures. A major preoccupation of women is skin sagginess.

Also known are non-woven stretchable masks which have to be stretched when they are placed on the face of the user. Typically, the stretching of the mask is irreversible. The user opens the packaging, grabs the opposite ends of the mask, and stretches the mask between the opposite ends, when putting it on face to irreversibly increase its width.

Examples of known face masks are disclosed in JP3120502, WO2009/135336, WO2009/116118, EP2103424, EP1813167, JP2004/097585, JP2010/259621,

JP2011/136019, JP2009/112803, US2010/324509, JP2004/149533, JP2009/297572, JP2009/147824, JP2009/113585, JP2010/25962 or JP2011/172732.

Some examples among these masks are stretchable. However, the stretching is irreversible and adjusting it correctly on face is very difficult. The mask has little or no interaction with the skin of a user, in particular for generating mechanical effects such as elongations and pressures. Moreover, the quantity of formula released to the skin is very low.

One aim of the invention is to provide a non-woven mask for application on a face of a user, which provides an enhanced cosmetic action on the skin of a user.

To this end, the invention concerns a mask as above mentioned, wherein the base sheet is made of an elastic non-woven material, the base sheet being configured to apply a first pressure at a first point located at a distance greater than 40 mm and less than 75 mm from the center of the central hole along the horizontal axis on a NARIKO face dummy, when stretched along the horizontal axis of more than 10%, and wherein the base sheet is configured to apply on a NARIKO face dummy a second pressure at a second point located at a distance greater than 65 mm and less than 100 mm from the center of the central hole below the horizontal axis A-A', at an angle greater than 35° and advantageously less than 80° when stretched along the horizontal axis of more than 10%, and wherein second pressure is equal or greater than the first pressure.

The mask according to the invention may comprise one or more of the following features, taken in isolation or according to any technical possible combination:

- the base sheet is elongated along the horizontal axis;
- the first pressure is comprised between 3 mmHg and 35 mmHg;
- the second pressure is comprised between 3 mmHg and 35mmHg;

- the base sheet comprises an absorbing non-woven layer for receiving a cosmetic product and an elastic support non-woven layer attached to the absorbing layer ;

- the absorbing layer is a spun lace non-woven layer advantageously comprising regenerated fibers, the support layer being a melt blown non-woven layer advantageously consisting of polyolefin fibers;

- the first attachment element and the second attachment element each comprise a side attachment hole for receiving a respective ear of a user;

- at least one side attachment hole is elongated along a side hole axis inclined with respect to the horizontal axis ;

- the angle made by the side attachment hole axis above the horizontal axis and the outer segment of the horizontal axis is comprised between 30° and 135°, advantageously between 30° and 90°;

- each side attachment hole defines an upper end and a lower end, an upper distance separating the upper end of a first side attachment hole and the upper end of a second side attachment hole being greater than a lower distance separating the lower end of the first side attachment hole from the lower end of the second side attachment hole ;

- the base sheet comprises at least one fused region in which the fibers of the non-woven are at least partially fused together and at least a region in which the fibers of the non-woven are not fused;

- at least a fused region extends across the first attachment element and/or across the second attachment element ;

- it comprises a cosmetic product carried by the base sheet, the cosmetic product being advantageously anti-age product.

The invention also concerns a method of cosmetic treatment of a face of a user, comprising the following steps:

- providing a mask as described above;

- elastically stretching the mask along the horizontal axis, advantageously of more than 10% ;

- applying the mask on a face of a user, the mouth of the user being located facing the central opening ;

- attaching the first and second side attachment elements respectively on the ears of the user ;

wherein the base sheet applies on the face of the user a first pressure at a first point located at a distance greater than 40 mm and less than 75 mm from the center of the central hole along the horizontal axis when stretched along the horizontal axis of more than 10%, and wherein the base sheet applies on the face of the user a second pressure at a second point located at a distance greater than 65 mm and less than 100 mm from the center of the central hole below the horizontal axis A-A', at an angle greater than 35° and advantageously less than 80° when stretched along the horizontal axis of more than 10%, and wherein the second pressure is equal or greater than the first pressure.

The invention will be better understood, upon reading of the following description, taken solely as an example, in view of the appended drawings, in which:

- Figure 1 is a front view of a first mask according to the invention ;

- Figure 2 is an exploded partial view of the base sheet of the mask of Figure 1 ;

- Figure 3 is a schematic view of a device able to measure pressures applied by the mask of figure 1 on a NARIKO dummy face ;

- Figure 4 is a face view of the location of the sensors to be placed on the NARIKO dummy face ;
- Figure 5 is a front view of a face of a user, the mask being applied on the face of the user ;
- 5 - Figure 6 is a side view of Figure 5, showing the mask applied on the side of the face of the user;
- Figure 7 to 11 show several other masks according to the invention.
- Figures 12 to 15 illustrate the specified dimensions of a NARIKO dummy face.

10 A first non-woven face mask 10 according to the invention is shown in Figure 1. This face mask 10 is for applying on a face 12 of a user, shown schematically in Figures 5 and 6.

The face mask 10 comprises a base sheet 14 defining a central hole 16 for passage of the mouth of the user, a first side attachment element 18 and a second side attachment element 20 for attaching the mask on the ears 22 of the user.

15 Advantageously, the mask 14 carries a cosmetic product 24 which is brought into contact with the face 12 of the user when the mask 14 is applied on the skin of the user.

The cosmetic product 24 is for example a gel, a cream, an oil, cosmetic water, a milky lotion or a powder. The cosmetic product 24 can contain any active ingredients. Preferably it is anti-aging.

20 It contains for example adenosine, stretch polymer, anti-age plant ingredients. Alternatively, or in complement, the cosmetic product contains a whitening agent, a soothing agent, an anti-inflammatory agent and an anti-acne agent.

Example of active agents contained in the cosmetic product 24 are ascorbic acid, ascorbic gluconate, niacineamide, ethyl ascorbic acid, elagic acid, GK2, salicylic acid,
25 tocopherol acetate.

The base sheet 14 is made of a non-woven material. By "non-woven", it is meant, in the sense of this invention, a substrate including fibers in which the individual fibers or filaments are arranged in a disordered manner in a sheet-like structure and which are neither woven nor knit. The fibers of the nonwoven body are generally linked to one
30 another, under the effect of a mechanical action (for example, by needle-punching, air jet, water jet, etc.), or under the effect of a thermal action, or by adding a binder.

Such a non-woven material is, for example, defined by standard ISO 9092, as a web or a sheet of fibers oriented directionally or at random, bound by friction and/or cohesion and/or adhesion, excluding paper or products obtained by weaving, knitting, tufting or
35 stitching incorporating threads or bonding filaments.

A non-woven material differs from a paper by the length of the fibers used. In paper, the fibers are shorter. However, there are nonwoven materials based on cellulose fibers that are produced by wet process and have short fibers as in paper. The difference between a nonwoven material and a paper is generally the absence of a hydrogen bond
5 between the fibers in a nonwoven material.

The non-woven body is produced based on fibers.

Advantageously, the mass percentage of hot-melt fibers contained in the nonwoven sheet is greater than 0.5% and is less than or equal to 100%, advantageously between 5% and 80%.

10 The hot-melt fibers are, for example, polyolefin fibers, such as polyethylene (PE), polypropylene (PP), polyethylene terephthalate (PET) or acrylic fibers, such as polymethyl methacrylate (PMMA), polyurethane fibers or the following thermoplastic fibers: polyvinyl chloride (PVC), styrene polymers (for example polystyrene PS, expandable polystyrene EPS, acrylonitrile butadiene styrene ABS terpolymer, styrene acrylonitrile copolymer,
15 styrene butadiene SB polymer), polyamides (PA), polycarbonates (PC), saturated polyesters (for example, polyethylene terephthalate glycol PET, polybutylene terephthalate glycol PBT), polyacetals (for example, polyoxymethylene POM, trioxane ethylene oxide copolymer), polyvinyl alcohol (PVA), or fluorinated polymers (for example polytetrafluoroethylene PTFE, polyvinylidene fluoride PVDF, and
20 polychlorotrifluoroethylene PCTFE) fibers.

The other fibers constituting the body are, for example, synthetic petroleum derivative-based fibers, natural plant- or animal-based fibers, and/or modified natural fibers, for example resulting from treatment or regeneration methods for forming fibers.

The non-woven body may be formed from one or more webs of consolidated fibers.

25 In a particular embodiment shown in Figure 2, the non-woven material constituting the base sheet 14 comprises an absorbing non-woven layer 30 for receiving the cosmetic product 24, and an elastic support non-woven layer 32, attached on the absorbing non-woven layer 30.

30 The absorbing layer 30 is for example made of a spun lace non-woven layer comprising modified natural fibers resulting from treatment or regeneration methods for forming fibers. In particular, the absorbing layer may comprise RAYON.

The absorbing layer 30 also may comprise synthetic petroleum derivative-based fibers such as polyolefin fibers, in particular polyethylene terephthalate glycol PET, and/or polyethylene fibers. In an advantageous embodiment, the mass percentage of synthetic
35 fibers is comprised between 0% and 70% and the mass percentage of modified natural fibers is comprised between 0% and 100%.

The absorbing layer 30 is able to receive the cosmetic product 24 and to retain it in the base sheet 14. It is intended to be brought into contact with the face 12 of the user.

The elastic layer 32 is for example a melt blown non-woven layer. It is advantageously purely made of synthetic petroleum derivative-based fibers, such as polyolefin fibers.

The elastic layer 32 is advantageously non-absorbing.

By "absorbing", it is meant that the layer 30 is able to absorb at least 10 weight % of a liquid as measured by the WSP 101-W-08f Three standard.

The mass percentage of cosmetic product is comprised between 20% and 3000% preferably between 200 and 1000% relative to the weight of the mask 10.

By "non-absorbing", it is meant that nonwoven absorption is not increasing above the residual humidity originally contained into the nonwoven (Residual Humidity RH%). This means usually that the layer 32 is able to absorb at most 10 weight % of a liquid as measured by the above mentioned standard.

The layers 30, 32 are laminated together. A patterned heat bonding is advantageously used for making the lamination.

The base sheet 14 has an elongate shape, advantageously rounded, which extends along a axis A-A' passing through the center 34 of the central hole 16 and through the first and second side attachment elements 18, 20.

As shown in figure 1, axis A-A' is « horizontal », i.e. it is advantageously located horizontally when the nose of the user is about to be introduced in the central hole 16 of the mask.

The « width » of the mask 10 or more generally the term « width » is a distance considered parallel or along the axis A-A'.

The "height" of the mask 10 or more generally the term « height » is a distance considered perpendicular to axis A-A'. The "thickness" of the mask is the distance taken between a first face of the mask 10 and a second opposite face of the mask 10.

The base sheet 14 extends between a first end 40 located on the left of Figure 1 to as second end 42 located on the right of Figure 1.

In the example of Figure 1, the base sheet 14 has a generally rounded shape. It defines an upper edge 44 located generally on one side of axis A-A' and a lower edge 46 located generally on the other side of axis A-A'. In Figure 1 the upper edge 44 and the lower edge 46 each comprise a central concave region 48 located between two convex side regions 50, 52.

The non-woven material forming the base sheet 14 is elastic. It can be reversibly stretched of at least 10%, advantageously between 10% and 150% along or parallel to axis A-A' measured with the WSP 110.4-X standard test method.

Accordingly, the base sheet 14 has a shape-memory effect when it is stretched. It recovers its initial shape after being stretched meaning that the nonwoven material should have a residual deformation below 8% of its original size when stretched at 50% during three cycles at dry stage using the method described in WSP110.1-X.standard test method.

The base sheet 14 is accordingly elastically stretchable at least along the axis A-A' or parallel to the axis A-A' between a rest non-stretched configuration, shown in Figure 1 and a stretched configuration, shown in Figures 5 and 6.

In the example of Figure 1, the maximum width of the base sheet 14, taken parallel to axis A-A' between the first end 40 and the first end 42 is greater, in particular twice greater, than the maximum height of the base sheet 14, taken perpendicularly to axis A-A'.

Moreover, the thickness of the base is at least ten times less than the maximum width of the base sheet 14.

The width of the base sheet 14 at rest is for example comprised between 150mm and 350mm. The height of the base sheet 14 is for example comprised between 80 mm and 250mm. The thickness of the base sheet 14 is lower than 5 mm and is advantageously comprised between 0.5 mm and 2.5 mm

In the example of Figure 1, the central hole 16 is located above the geometric center of the base sheet 14.

The central hole 16 is a through hole. It extends over the whole thickness of the base sheet 14 and opens on opposite surfaces of the base sheet 14.

In the example of Figure 1, the central hole 16 is elongated along axis A-A'. The maximum width of the central hole along axis A-A' is lower than 20 % of the maximum width of base sheet 14 when mask is elongated

As mentioned above, the hole 16 is able to receive the mouth of the user, in particular, the lips of the user, in order to let the user breathe when the mask 10 is placed on the face 12.

The central hole 16 has a closed contour, i.e. it is located at a distance of the outline of the base sheet 14 and also at a distance of each attachment element 18, 20.

In this example, the first side attachment element 18 and the second side attachment 20 are made respectively of a first side attachment hole 60 and of a second

side attachment hole 62. Other attachment methods/devices can be used such as strings, pliers, bandages; rubber bands, etc.

Each attachment hole 60, 62 has upper end 66, 66' and lower ends 64, 64' and each attachment hole 60, 62 extends along a respective side hole axis C-C', D-D' which is inclined with respect to the horizontal axis A-A', between a lower end 64 and an upper end 66.

Advantageously, the angle α defined between the upper part of axis C-C', D-D' and the outer part of axis A-A' is comprised between 0° and 90° .

In the example of Figure 1, each side hole axis C-C', D-D' diverts from the center 34 of the through hole 16 in the direction from the lower end 64, 64' to the upper end 66, 66'. Angle α is then greater than 35° and less than 90° .

Additionally, to provide a strong pressure effect on the skin of the user, and a lift-up effect, the width W1 separating the upper end 66 of the first attachment hole 60 from the upper end 66' of the second attachment hole 62, is higher than the width W2 separating the lower end 64 of the first attachment hole 60 from the lower end 64' of the second attachment hole 62.

In a preferred embodiment, W1 and W2 are respectively smaller than the E1 and E2 average distances of a 45 year-old woman depicted in Figure 5.

The E1 distance is defined as the average distance separating the upper ends 80 of each ear 22 of a 45-54 year-old Japanese woman passing under the nose, touching the nose. In 2012, this distance E1 is 298,32 mm.

The distance E2 is defined as the distance connecting the lower ends 82 of the ears over the chin 84 for the same group of woman.

In 2012, this distance is equal to 255,86 mm.

The E1 and E2 values are average values measured during a typology study conducted in Japan in 2011 on 203 women.

In a preferred embodiment, the elongation M1 expressed in percentage is defined as

$\left(\frac{E1 - W1}{W1}\right) \times 100$ and the elongation M2 taken equal to $\left(\frac{E2 - W2}{W2}\right) \times 100$ are in the

following intervals:

- $20\% \leq M1 < 40\%$ and $40\% \leq M2 < 60\%$; or
- $40\% \leq M1 < 90\%$ and $10\% \leq M2 < 35\%$.

As shown above, the base sheet 14 is configured to be stretched along or parallel to axis A-A' between a rest configuration shown in Figure 1 and an elongated configuration

shown in Figures 5 and 6. The stretching is made between the side ends 40, 42 of the base sheet 14. It is comprised between 10% and 150%.

According to the invention, the base sheet 14 is configured to apply a first pressure greater than 3 mm Hg on an NARIKO face dummy 88 (shown in Figures 3 and 12 to 15) at a first point 90 located at a distance D1 greater than 40 mm and less than 75 mm from the center 34 of the central hole 16 when base sheet 14 is stretched along axis A-A' of more than 10%, preferably between 10% and 150%.

The first pressure applied to first point 90 is generally comprised between 3 mm Hg and 35 mm Hg.

Moreover, the base sheet 14 is configured to apply on a NARIKO face dummy 88 a second pressure applied to second point 92 greater than the first pressure applied at the first point 90, at a second point 92 located at a distance D2 greater than 65 mm and less than 100 mm from the center 34 of the central hole 16 below the horizontal axis A-A' at an angle α greater than 35° and comprised between 35° and 55° with the horizontal axis A-A', when base sheet 14 is stretched horizontally of more than 10%.

Accordingly, the second pressure is generally comprised between 3mm Hg and 35 mm Hg; with second pressure always higher than first pressure to provide lift up effect.

The position of the first point 90 and the position of the second point 92 are schematically illustrated in projection in figure 4. The pressures are actually measured on the actual face dummy 88 with the measurement device 100 shown in figure 3.

The NARIKO face dummy 88 is shown in Figure 3. The face dummy 88 is standardized. This face dummy 88 is supplied advantageously by the Nakai Craft Industry Corporation in Tokyo, Japan.

It is made from reinforced fiber plastic core onto which a layer of smooth polyurethane coating has been applied.

The dimensions of the face dummy 88 are summed up in the following table, taken in view of figures 12 to 15.

TABLE 1

Distance	Length (mm)
E1	275
E2	255
E3	42
E4	63

10

E5	16
E6	72
E7	36
E8	145
E9	200

In order to measure pressures at the first point 90 and at the second point 92, the measurement device 100 shown in Figure 3 can be used.

The device 100 comprises a pair of jaws 102 to clamp the ends 40, 42 of the base sheet 14. The device 100 also comprises a tensioning apparatus 104 for horizontally stretching the base sheet 14 and a sensor system 106 for measuring the applied pressure at the first point 90 and at the second point 92.

In the example of Figure 3, the tensioning apparatus 104 comprises a dynamometer 108, activating a tensioning bar 110 and connecting wires 112, 114 connecting the tensioning bar 110 to the upper and lower ends of each jaw 106.

The tensioning bar 110 extends transversally with regard to sagittal plane of the NORICO face dummy 18. The bar 110 is movable horizontally by an activating rod 116 of the tensiometer 108.

The sensor system 106 comprises pressure sensors 115, which are placed on the front of the NORICO face dummy 88, at the distances defined above.

In a very specific example, the measuring apparatus comprises vertical jaws 102 having a height of 160 mm, and a width of 11 mm. and a weight of 34,6g.

The jaws 102 are clamped at the ends 40, 42 of the base sheet 14. The connecting wires 112, 114 are made of steel. Their length is respectively 550 mm and 550 mm. The tensioning bar 110 has a length of 155 mm. The tensioning rod 116 is connected to a dynamometer 108 commercially available under the Trademark IMADA model DPX-10T.

The tensioning bar 110 is placed at a height of 220 mm above the support 118 on which the face dummy 88 is placed. The activating rod 116 of the dynamometer extends in the sagittal axis of the face dummy 88.

The sensors 115, 125 are commercially available under the brand KIKUHIME from TT MediTrade Soledet 15, DK 4180 Soro. They are connected to an analyzer (sub bandage & body pressure measuring device) 117 able to determine the pressure applied on each sensor 115.

The measurement is carried out as follows. The temperature of the room is regulated at 23°C. The hygrometry is regulated at 50%.

The jaws 102 are placed at the ends 40, 42 of the mask. The wires 112, 114 are then connected to the rod 110 and the dynamometer 108 is activated to provide a pulling force on the tensioning apparatus 106. The mask 10 is applied on the front surface of the NARIKO face dummy 88. The pulling force generates a horizontal elongation of the mask 10 which applies on the face of the NARIKO face dummy 88.

The elongation is measured as the shift of dynamometer 108 along a graduated scale

In particular an elongation between 0% and 150% can be chosen to carry out the measurements.

The pressures are measured at the first point 90 by the sensor 115 and at the second point 92 by the sensors 116, until the measured value is stable, generally after a time longer than 900 seconds.

Use of the mask 10 according to the invention for cosmetic treatment of a face 12 of a user will be now described.

Initially, the user grabs the mask and places it on skin face 10 and picks the respective ends 40, 42 of the mask 10 in his hands.

The user then symmetrically stretches the mask 10 along axis A-A' of about 10% or more against the elastic behavior of the non-woven material forming the base sheet 14.

In a first mode of operation, cosmetic product 24 is initially impregnating the mask 10 in the packaging receiving the mask 10.

The user applies the surface of the mask 10 having the cosmetic product 24 advantageously on the face line, the nasolabial line, the chin and the cheeks as shown in figure 5.

The user then inserts the ears 22 in the side holes 60, 62 to attach the mask 10 laterally.

After attachment of the mask 10, the base sheet 14 applies on the face 12 of the user a first pressure at the first point 90 located at a distance greater than 40 mm and smaller than 75 mm from the center of the central hole 16 along the horizontal axis A-A'.

Moreover, the base sheet 14 applies on the face 12 of the user a second pressure greater than the first pressure at a second point 92 located at a distance greater than 65 mm and smaller than 100 mm from the center of the central hole below the horizontal axis A-A', at an angle greater than 35°.

As a consequence, the face mask 10 provides enhanced cosmetic effect on the skin of the user. Thanks to the elastic character of the non-woven material forming the base

sheet 14 of the mask 10, the mask 10 adjusts itself precisely on the face surface of the user, without losing its shape-memory properties.

The mask 10 being stretched, it generates the following effects.

5 A strong pressure is applied on the skin due to the attachment of the mask 10 on the ears 22 of the user, which prevents the mask 10 to return to its rest configuration.

The mask 10 also provides a skin movement referred to as « lift-up effect » which is due to adherence of nonwoven and to the elastic force of the mask 10 applied on the skin. The elastic force immobilizes the skin of the user.

10 The mask 10 also allows a more significant desorption of the cosmetic product due to a “sponge effect”, in which more liquid is desorbed due to the deformation and pressure of the mask 10.

When width W2 is less than width W1, the mask 10 provides a strong “lift up” effect on the skin of the user which provides firming effect to the face of the user.

15 A second mask 150 according to the invention is shown in Figure 7. This mask 150 differs from the first mask 10 in that it comprises a tab 152 along the lower edge.

Figures 8 to 11 disclose masks 160 according to the invention which further comprise at least one fused region 162 in which the fibers of the non-woven forming the base sheet 14 are at least partially fused and at least a non-fused region 164, in which the fibers of the non-woven are not fused. Fusion of nonwoven avoids its deformation and
20 reduces the proportion that is elongated. This also generates more pressure on the skin.

In the example of Figure 9, the mask 160 comprises two fused regions 162 surrounding the attachment elements 18, 20 and a central non-fused region 164 in which the fibers of the non-woven are not fused.

25 The distance separating the inner edges 166 of the fused region 162 from the attachment element 18, 20 along axis A-A' is comprised between 5 mm and 20 mm, in particular between 8 mm and 12 mm.

The mask 160 of Figure 9 comprises two partially fused regions 162, with a strip shape. Each region 162 is surrounded laterally, by a central non-fused region 164 towards the central hole 16 and by a side non-fused region 164 extending to the ends 40, 42 of the
30 mask, away from the central hole 16.

Each fused region 162 is delimited upwardly by the upper edge 44 and downwardly by the lower edge of the base sheet 14.

The mask 160 of Figure 10 comprises a central non-fused region 164 and fused regions 162 extending to the ends 40, 42 and comprising the attachment element 18, 20.

35 The mask 160 also comprises two side non-fused regions 164 located along the outer edge of each attachment element 18, 20.

The mask 160 shown in Figure 11 has a central non-fused region 164 and two lateral fused regions 162 which extend to the ends 40, 42 of the mask.

The central non-fused region 164 has two upper lateral areas 168 which are located above the attachment element 18, 20.

In the embodiment of Figures 8 to 11, the fused regions 162 are made by heating locally the non-woven at a temperature comprised 100°C to 150°C and between 0.2 and 2 seconds depending on the composition of the fusible fibers,

The fused regions 162 have the beneficial effect of avoiding the deformation and/or tearing when the mask 10 is stretched. The fused regions 162 also generate higher pressures on the skin by reducing the stretchable surface of the non-woven base sheet 14.

The fused regions 162 become repellant to cosmetic composition and thus prevent cosmetic product to be located facing the ears or facing the hairs of the user.

Examples of pressures applied at first point 90 and at a second point 92 for masks according to the invention are given in the following tables. These pressures were measured when the mask 10 was stretched such as W1=E1 and W2=E2 on the NARIKO face dummy 88.

TABLE 2

	With fused regions		Without fused regions	
	Pressure at first point 90 (mm Hg)	Pressure at second point 92 (mm Hg)	Pressure at first point 90 (mm Hg)	Pressure at second point 92 (mm Hg)
Figure 8	9,5	24	8	9,5
Figure 9	8,5	17	8	9,5
Figure 10	9,5	17,5	8	9,5
Figure 11	8	17,5	8	9,5

In an alternative, the mask 10 is packaged without cosmetic product 24. The cosmetic product 24 is applied on the mask 10 by the user or is placed directly on the face of the user, before applying mask 10.

CLAIMS

1.- Non-woven face mask (10; 150; 160) for applying on a face (12) of a user, comprising :

5 - a base sheet (14) delimiting a central hole (16) for accommodating a mouth of the user, the base sheet (14) defining a horizontal axis (A-A') passing through the center of the central hole (16) ;

 - a first side attachment element (18) and a second side attachment element (20) for attaching to the ears (22) of a user;

10 wherein the base sheet (14) is made of an elastic non-woven material, the base sheet (14) being configured to apply a first pressure at a first point (90) located at a distance greater than 40 mm and less than 75 mm from the center of the central hole (16) along the horizontal axis (A-A') on a NARIKO face dummy (88), when stretched along the horizontal axis of more than 10%, and wherein the base sheet (14) is configured to apply
15 on a NARIKO face dummy (88) a second pressure at a second point (92) located at a distance greater than 65 mm and less than 100 mm from the center of the central hole (16) below the horizontal axis A-A', at an angle greater than 35° and advantageously less than 80° when stretched along the horizontal axis (A-A') of more than 10%, and wherein second pressure is equal or greater than the first pressure.

20 2.- Mask (10; 150; 160) according to claim 1, wherein the first pressure is comprised between 3 mmHg and 35 mmHg.

 3.- Mask (10; 150; 160) according to claim 1 or 2, wherein the second pressure is comprised between 3 mmHg and 35mmHg.

25 4.- Mask (10; 150; 160) according to any one of the preceding claims, wherein the base sheet (14) comprises an absorbing non-woven layer (30) for receiving a cosmetic product (24) and an elastic support non-woven layer (32) attached to the absorbing layer (30).

30 5.- Mask (10; 150; 160) according to claim 4, wherein the absorbing layer (30) is a spun lace non-woven layer advantageously comprising regenerated fibers, the support layer (32) being a melt blown non-woven layer advantageously consisting of polyolefin fibers.

 6.- Mask (10; 150; 160) according to any one of the preceding claims, wherein the first attachment element (18) and the second attachment element (20) each comprise a side attachment hole (60, 62) for receiving a respective ear (22) of a user.

7.- Mask (10; 150; 160) according to claim 6, wherein at least one side attachment hole (60, 62) is elongated along a side hole axis (C-C', D-D') inclined with respect to the horizontal axis (A-A').

5 8.- Mask (10; 150; 160) according to claim 7, wherein the angle (α) made by the side attachment hole axis (C-C', D-D') above the horizontal axis (A-A') and the outer segment of the horizontal axis (A-A') is comprised between 30° and 135°, advantageously between 30° and 90°.

10 9.- Mask (10; 150; 160) according to any one of claims 6 to 8, wherein each side attachment hole (60, 62) defines an upper end (64, 64') and a lower end (66, 66'), an upper distance (W1) separating the upper end (64) of a first side attachment hole (60) and the upper end (66) of a second side attachment hole (62) being greater than a lower distance (W2) separating the lower end (64') of the first side attachment hole (60) from the lower end (66') of the second side attachment hole (62).

15 10.- Mask (150; 160) according to any one of the preceding claims, wherein the base sheet (14) comprises at least one fused region (164) in which the fibers of the non-woven are at least partially fused together and at least a region (162) in which the fibers of the non-woven are not fused.

20 11.- Mask (10; 150; 160) according to claim 10, wherein at least a fused region (164) extends across the first attachment element (18) and/or across the second attachment element (20).

12.- Mask (10; 150; 160) according to any one of the preceding claims, wherein it comprises a cosmetic product (24) carried by the base sheet (14), the cosmetic product (24) being advantageously anti-age product.

25 13.- Method of cosmetic treatment of a face of a user, comprising the following steps:

- providing a mask (10; 150; 160) according to any one of the preceding claims ;
- elastically stretching the mask (10; 150; 160) along the horizontal axis (A-A'), advantageously of more than 10% ;
- applying the mask (10; 150; 160) on a face (12) of a user, the mouth of the user
- 30 being located facing the central opening (16) ;
- attaching the first and second side attachment elements (18, 20) respectively on the ears (22) of the user ;

wherein the base sheet (14) applies on the face of the user a first pressure at a first point (90) located at a distance greater than 40 mm and less than 75 mm from the center

35 of the central hole (16) along the horizontal axis (A-A') when stretched along the horizontal axis of more than 10%, and wherein the base sheet (14) applies on the face of

the user a second pressure at a second point (92) located at a distance greater than 65 mm and less than 100 mm from the center of the central hole (16) below the horizontal axis A-A', at an angle greater than 35° and advantageously less than 80° when stretched along the horizontal axis (A-A') of more than 10%, and wherein the second pressure is

5 equal or greater than the first pressure.