

Title (en)

SEALED DIAPER AND A METHOD FOR PRODUCING THE SAME

Title (de)

GESCHLOSSENE WINDELHOSE UND VERFAHREN ZU DEREN HERSTELLUNG

Title (fr)

COUCHE-CULOTTE HERMETIQUE ET SON PROCEDE DE PRODUCTION

Publication

**EP 1021151 A1 20000726 (DE)**

Application

**EP 98954381 A 19981008**

Priority

- DE 19744537 A 19971009
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Abstract (en)

[origin: DE19744537A1] The closed and disposable diaper pants have a one-piece layer (4) of a watertight material, with a central opening (6), covering the main section (2) of the garment at the body side. It forms the inner side of the garment against the body. An additional elasticity (25) is fitted to the longitudinal edge zones (28) of the central opening (6). In an Independent claim, the diaper pants are produced by gathering together the three main layers of the outer and inner layers (14,18) with an intermediate absorbent layer (16), and the elastic materials are applied to the leg and waist openings. The materials are advanced, together with the watertight inner layer (4), and a matching opening is made in the layers at intervals and the additional elastic is fitted from the lateral edge zones of the opening (6) on the advance direction of the initial material web. A material web, with lateral elasticity, is fed on the line of the second material layer. The materials are cut laterally to form the longitudinal edge zones (28) of the opening (6) with the additional elastic system (25) as longitudinal sections to be secured to the longitudinal opening edges (28) while under tension. The second material web is secured to the body side of the initial gathered material web, and they are cut laterally to give the material sections for the diaper pants. The cut sections are folded on a lateral line, parallel to the advance direction, so that the longitudinal ends of the front and back of the garment lie flush over each other, and the leg openings are formed. The front and back sections are bonded together, to give the finished garment. Preferred Features:- The watertight layer (4) is a laminate containing a film, or a spun fiber non woven or a melt blown layer, with at least one spun fiber and one melt blow layer. The additional elasticity (25) is fitted to the longitudinal (28) and lateral edge zones of the opening (6), with a surface bonding at least at the longitudinal edges (28) and flush with the opening edges, to surround the opening (6) in a rectangle. The reassertion of the elastic system on the lateral opening (6) edge zones is higher than along the longitudinal edge zones on a given stretch action. Spacers are between the permeable layer (14) of the main section (2) and the one-piece layer (4) with the opening (6), at least close to the opening (6). The spacers are formed from part of the elastic system (25) at the one-piece layer (4) at the longitudinal edge zones (28). The elastic system (25) is \-0.3 mm thicker at the longitudinal edge zones (28) of the opening (6) than the thickness of the layer (4) material, and pref. \-0.5 mm thicker. Outside the elastic sections of the opening (6) zone, the one-piece material layer (4) is durably bonded to the permeable layer (18). The edges of the permeable layer (18) are separated from the edges of the outer impermeable layer (14), at least in sections.

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