

# Europäisches Patentamt European Patent Office Office européen des brevets



(11) **EP 1 266 992 A2** 

(12)

# **EUROPEAN PATENT APPLICATION**

(43) Date of publication:

18.12.2002 Bulletin 2002/51

(51) Int Cl.7: **D06B 11/00** 

(21) Application number: 02076685.3

(22) Date of filing: 26.04.2002

(84) Designated Contracting States:

AT BE CH CY DE DK ES FI FR GB GR IE IT LI LU MC NL PT SE TR

Designated Extension States:

AL LT LV MK RO SI

(30) Priority: 11.05.2001 NL 1018050

(71) Applicant: Ten Cate Protect B.V. 7443 PV Nijverdal (NL)

(72) Inventor: Craamer, Johannes Antonius 6835 HX Arnhem (NL)

(74) Representative:

Van Someren, Petronella F. H. M. et al Arnold & Siedsma, Advocaten en Octrooigemachtigden, Sweelinckplein 1 2517 GK Den Haag (NL)

## (54) Non-transparent fabric

(57) The invention relates to an at least partially non-transparent fabric, comprising a weave provided with a discontinuous pattern of dots which lie at a determined mutual distance and which are manufactured from a colour paste, preferably titanium dioxide paste

which is optionally mixed with one or more dyes. The colour paste is preferably applied to the inside of the fabric. The invention further relates to clothing manufactured from the fabric, in particular hospital clothing.

### Description

**[0001]** The invention relates to an at least partially non-transparent fabric, particularly for use in hospital clothing.

**[0002]** White industrial clothing such as is worn for instance in the health care sector has the drawback of being see-through. One option for making the clothing less transparent is denser materials, but these are often too warm or too stiff, certainly for use during the summer.

**[0003]** It is now the object of the present invention to provide a fabric for manufacturing such clothing (further designated as hospital clothing) which is comfortable to wear, breathes well, is not too warm in the summer but is nevertheless non-transparent.

**[0004]** This is achieved with the invention by manufacturing the clothing from an at least partially non-transparent fabric, comprising a weave provided with a discontinuous pattern of dots which lie at a determined mutual distance and which are manufactured from a colour paste.

**[0005]** Because hospital clothing is usually white, the colour paste is preferably titanium dioxide paste. However, for application as surgical clothing, which is often coloured, the titanium dioxide paste can be mixed with one or more dyes.

**[0006]** It is particularly recommended that the colour paste is applied to the inside of the fabric, because the structure and appearance on the outside of the fabric is then not changed or affected.

**[0007]** The pattern can be applied to the fabric by means of a template. It is important to prevent the dots of the pattern forming a closed layer. Once applied and cured, the dots must still form a discontinuous pattern since only then can the wearer comfort of the material and the breathing capacity be ensured. A fabric can be made non-transparent to a greater or lesser extent by varying the size of the dots and the mutual distance. The breathing capacity can also be influenced hereby.

[0008] The fabric according to the invention can be applied for diverse types of uniform for use in the health care sector, although the invention can also be applied in consumer textiles. Clothing manufactured from the fabric therefore also forms part of the present invention.

[0009] By way of illustrating the invention there follows below an example of the manufacture of a fabric.

### **EXAMPLE**

[0010] A roll of the following fabric:

Material: warp x weft PES/Co 65/35% Thread count: warp x weft 20 x 20 Ne Density: warp x weft 38 x 29 threads per cm. Weight: 225 gram/m<sup>2</sup>

was provided, by means of a rotary printing machine via a template with openings of 60 microns, with a dot design of 1 mm diameter with a uniform mutual distance of 0.2 mm printed with a printing paste consisting of 250 g/Kg titanium dioxide in Acrylate. After drying the transparency was compared with that of the original material. It was found that the transparency of the printed material can be reduced by about 80%, wherein the good properties of the fabric, such as air permeability and soft feel, are retained. The transparency can even be reduced to practically 100%, although this may adversely affect other advantageous properties of the fabric, such as for instance air permeability and soft feel.

### Claims

15

20

25

30

- At least partially non-transparent fabric, comprising a weave provided with a discontinuous pattern of dots which lie at a determined mutual distance and which are manufactured from a colour paste.
- **2.** Fabric as claimed in claim 1, **characterized in that** the colour paste is titanium dioxide paste.
- Fabric as claimed in claim 2, characterized in that the titanium dioxide paste is mixed with one or more dves.
- Fabric as claimed in claims 1-3, characterized in that the colour paste is applied to the inside of the fabric.
- Clothing manufactured from fabric as claimed in claims 1-4.
- 6. Clothing as claimed in claim 5, characterized in that the clothing is hospital clothing.

50

55