

(19)



Europäisches Patentamt

European Patent Office

Office européen des brevets



(11)

EP 1 325 980 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

09.07.2003 Bulletin 2003/28

(51) Int Cl.7: **D21H 27/20**

// (D21H19/14, 19:44)

(21) Application number: **02425004.5**

(22) Date of filing: **08.01.2002**

(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

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(54) **Ecological lining for wallpaper**

(57) The invention concerns an ecological lining for wallpaper, consisting of a composition of one or more vegetal resins.

Examples of the vegetal resins can be the resins MAGALEM 2650, MAGALEM 6005 and MAGACLEAR

687, to which can eventually be added some additives of natural origin, as the resins MAGAWET N and MAGACOLOR BIANCO S.

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Description

[0001] The present invention concerns an ecological lining for wallpaper, particularly suited to replace the polyvinyl chloride used up-to-date.

[0002] According to known technique, wallpapers are prepared nowadays by hot spreading a layer of PVC on a paper sheet. The combined material thus obtained is then painted and newly hot embossed. As known, PVC is a toxic and cancerogenous substance. It is hence evident that such a dressing process, which involves several hot-working steps, causes considerable amounts of PVC, in the form of vapours, to penetrate into the ambient air, with possible damages for the health of the people doing the work or, in the best of assumptions, with very high fixed costs for the setting up and operation of plants and machinery allowing to efficiently remove the harmful substances from the working environment.

[0003] Furthermore, the good quality wallpapers normally last a very long time so that, in the long run, part of the PVC of the external layer tends to be released also in the environment where the wallpaper has been applied, with possible damages for the health of the customer. This damage is even more likely to occur in environments occupied by children, where the stresses are higher, since they tend to scratch the wallpaper and possibly inhale some flakes thereof. Moreover, at the end of their use, the wallpapers are eliminated, creating wastes with a given toxicity, even though they are not classified as special wastes.

[0004] On the other hand, in spite of there being a great variety of plastic materials which are atoxic, or anyhow less harmful than PVC, it has not been possible up to now to find a material apt to combine the washability with the resistance to scratches and to heat, as provided by PVC.

[0005] These and other drawbacks are brilliantly solved by the present invention, which concerns an ecological lining for wallpaper, characterized in that it consists of a composition of one or more vegetal resins.

[0006] Preferably, said composition comprises the commercial vegetal resins MAGALEM 2650, MAGALEM 6005, MAGACLEAR 687, available at Maga's Plast S.a.s., Via Marconi 16/A, 20024 Garbagnate Milanese (Milan), Italy. To such resins, one may eventually add one or more of the following commercial vegetal resins: MAGAWET N and MAGACOLOR BIANCO S, also available at Maga's Plast S.a.s..

[0007] A preferred composition comprises from 30% to 70% by weight of MAGALEM 2650, from 21% to 61% by weight of MAGALEM 6005, from 0% to 10% by weight of MAGAWET N, from 0% to 15% by weight of MAGACOLOR BIANCO S, and from 0,001% to 5% by weight of MAGACLEAR 687. Still preferred is a composition comprising from 40% to 60% by weight of MAGALEM 2650, from 31% to 51% by weight of MAGALEM 6005, from 0,001% to 5% by weight of MAGAWET N, from 5% to 10% by weight of MAGA-

COLOR BIANCO S, and from 0,1% to 2% by weight of MAGACLEAR 687.

[0008] Further advantages of the present invention will anyhow be more evident from the following detailed description thereof.

[0009] The present invention provides for the use of resins of vegetal origin to prepare wallpaper.

[0010] The support paper is lined with the mixture of resins, so as to acquire the properties of impermeabilization and resistance to scratches and heat, typical of such papers.

[0011] Particularly suitable resins are those marketed by Maga's Plast under the names of MAGALEM 2650, MAGALEM 6005 and MAGACLEAR 687, or having a similar composition. Additives can be added to such resins, also of natural origin, such as the resins marketed by Maga's Plast under the names of MAGAWET N and MAGACOLOR BIANCO S, or having a similar composition.

[0012] All these resins are latexes modified in an aqueous suspension.

[0013] Preferably, the mixture is prepared with a composition including the following ranges, where the percentages are percentages in weight on the whole composition:

MAGALEM 2650	30-70%
MAGALEM 6005	21-61%
MAGAWET N	0-10%
MAGACOLOR BIANCO S	0-15%
MAGACLEAR 687	0,001- 5%

[0014] Particularly good results are obtained with a composition falling within the following ranges:

MAGALEM 2650	40-60%
MAGALEM 6005	31-51%
MAGAWET N	0,001- 5%
MAGACOLOR BIANCO S	5-10%
MAGACLEAR 687	0,1- 2%

[0015] The ecological lining according to the present invention is applied with the common methods adopted in known technique. The vegetal resins allow to obtain an impermeabilization and a strength to scratches which is in no way inferior to those which can be obtained with the normal PVC linings. Also the final hot embossing treatment is carried out without creating any problems. It is hence positively deemed to have obtained a lining which provides all the advantages of PVC, without the need to contain halogens, phthalic plasticizers and heavy metals, so as to involve exceptional benefits as far as health and impact on the environment.

[0016] The two examples given hereunder allow to establish the validity of the composition according to the present invention, without however limiting its scope.

EXAMPLE 1

[0017] An ecological lining according to the present invention was prepared with the following composition (the values are percentages in weight):

MAGALEM 2650	43,7
MAGALEM 6005	45,0
MAGAWET N	2,3
MAGACOLOR BIANCO S	7,5
MAGACLEAR 687	1,5

[0018] A perfectly spreadable liquid was obtained, which was subsequently hot applied onto a paper support and embossed. The comparison with a similar wallpaper lined in a conventional manner showed no defects.

EXAMPLE 2

[0019] An ecological lining according to the present invention was prepared with the following composition ratio:

MAGALEM 2650	65,0
MAGALEM 6005	31,5
MAGACLEAR 687	3,5

[0020] A spreadable viscous liquid was obtained, which was hot applied onto a paper support and embossed. No appreciable defects were evidenced in comparison with a conventionally produced wallpaper.

EXAMPLE 3

[0021] An ecological lining according to the present invention was prepared with the following composition ratio:

MAGALEM 2650	49,7
MAGALEM 6005	40,6
MAGAWET N	0,2
MAGACOLOR BIANCO S	9,0
MAGACLEAR 687	0,5

[0022] A spreadable liquid was obtained, which was hot applied onto a paper support and embossed. No appreciable defects were evidenced in comparison with a conventionally produced wallpaper.

Claims

1. Ecological lining for wallpaper, **characterized in that** it consists of a composition of one or more vegetal resins.

2. Ecological lining as in claim 1), **characterized in that** it consists of a mixture of natural modified latexes.

3. Ecological lining as in claim 1) or 2), **characterized in that** it consists of a mixture of the resins MAGALEM 2650, MAGALEM 6005 and MAGACLEAR 687, or of resins having a similar composition.

4. Ecological lining as in claim 2) or 3), **characterized in that** additives of natural origin are added to said resins

5. Ecological lining as in claim 4), **characterized in that** such additives are selected in the group formed by MAGAWET N and MAGACOLOR BIANCO S, or having a similar composition.

6. Ecological lining as in any one of the previous claims, **characterized in that** it contains, in percentages by weight, from 30 to 70% of MAGALEM 2650, from 21 to 61% of MAGALEM 6005, from 0 to 10% of MAGAWET N, from 0 to 15% of MAGACOLOR BIANCO S, and from 0,001 to 5% of MAGACLEAR 687.

7. Ecological lining as in claim 6), **characterized in that** it contains 65% by weight of MAGALEM 2650, 31,5% by weight of MAGALEM 6005, and 3,5% by weight of MAGACLEAR 687.

8. Ecological lining as in claim 6), **characterized in that** it contains, in percentages by weight, from 40 to 60% of MAGALEM 2650, from 31 to 51% of MAGALEM 6005, from 0,001 to 5% of MAGAWET N, from 5 to 10% of MAGACOLOR BIANCO S, and from 0,1 to 2% of MAGACLEAR 687.

9. Ecological lining as in claim 8), **characterized in that** it contains 43,7% by weight of MAGALEM 2650, 45% by weight of MAGALEM 6005, 2,3% by weight of MAGAWET N, 7,5% by weight of MAGACOLOR BIANCO S, and 1,5% by weight of MAGACLEAR 687.

10. Ecological lining as in claim 8), **characterized in that** it contains 49,7% by weight of MAGALEM 2650, 40,6% by weight of MAGALEM 6005, 0,2% by weight of MAGAWET N, 9,0% by weight of MAGACOLOR BIANCO S, and 0,5% by weight of MAGACLEAR 687.

11. Wallpaper, obtained by applying onto a layer of support paper an ecological lining according to any one of the previous claims.



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EUROPEAN SEARCH REPORT

Application Number
EP 02 42 5004

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The present search report has been drawn up for all claims			
Place of search MUNICH		Date of completion of the search 30 July 2002	Examiner Nestby, K
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			

EPO FORM 1503 03.82 (P04C01)

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