

(19)



(11)

EP 2 184 340 A1

(12)

EUROPEAN PATENT APPLICATION

(43) Date of publication:

12.05.2010 Bulletin 2010/19

(51) Int Cl.:

C11D 3/00 (2006.01)

C11D 3/20 (2006.01)

C11D 17/04 (2006.01)

(21) Application number: **08381036.6**

(22) Date of filing: **05.11.2008**

(84) Designated Contracting States:

**AT BE BG CH CY CZ DE DK EE ES FI FR GB GR
HR HU IE IS IT LI LT LU LV MC MT NL NO PL PT
RO SE SI SK TR**

Designated Extension States:

AL BA MK RS

(71) Applicant: **KH Lloreda, S.A.**

08420 Canovelles (Barcelona) (ES)

(72) Inventor: **Lloreda Piña, Jose Maria**

08420 Canovelles (ES)

(74) Representative: **Martin Santos, Victoria Sofia**

UDAPI & Asociados

Patentes y Marcas

Explanada, 8

28040 Madrid (ES)

(54) **Disposable wipe for toilets**

(57) This invention refers to a disposable wipe suitable for cleaning and disinfection of toilet seats. The wipe which is the object of this invention is made from soluble cellulose which is dispersible in water and is impregnated with a cleansing and disinfectant solution. The cleansing

wipe for toilets is **characterised in that** it includes a cellulose layer which is impregnated with surfactants and a synergistic biocide mixture

EP 2 184 340 A1

Description

OBJECT OF THE INVENTION

[0001] This invention refers to a disposable wipe for cleaning and disinfection of toilet seats.

[0002] The wipe which is the object of this invention is made from soluble cellulose which is dispersible in water and is impregnated with a cleansing and disinfectant solution.

[0003] The cleansing wipe for toilets is **characterised in that** it includes a cellulose layer which is impregnated with surfactants and a synergistic biocide mixture.

BACKGROUND TO THE INVENTION

[0004] The problem deriving from the use of public toilets is well known. Even in cases in which toilets are adequately cleaned and maintained, the high number of users means that there may be problems with lack of cleanliness and the existence of germs and bacteria.

[0005] It would be convenient for there to be an appropriate means which would permit those users who so require or desire, to carry an element, which was of a small size and therefore easy to transport, which would make it possible to clean the toilet seat prior to using it.

[0006] This invention resolves the aforementioned problem by means of a disposable wipe, which is easy for the user to carry and which can be disposed of following use in the actual toilet, and which is impregnated with a substance which cleans and disinfects the surface on which the wipe will be used.

DESCRIPTION OF THE INVENTION

[0007] The cleansing wipe which is the object of the invention is indicated for cleaning toilets, particularly the seats thereof.

[0008] The wipe is made from soluble paper and is dispersible in water and is also impregnated with a cleansing and disinfectant solution. In this way the user may use the wipe to clean and disinfect the toilet seat and subsequently dispose of it in the toilet, as it is biodegradable in water.

[0009] This wipe is particularly useful on those occasions when the user is obliged to use a public toilet, thus ensuring the removal of any germs and bacteria.

[0010] The invention is characterised by the fact that it comprises a cellulose layer with an appropriate weight which ensures that it does not tear during the cleaning operation, and which also enables it to be disposed of in the toilet. The wipe should also have sufficient absorption of the cleansing and bactericidal solution with which it is impregnated.

[0011] It is important that the impregnation has the lowest possible surface tension in order to ensure that the surface to be cleaned is dampened. This fact is optimised according to the mixture of surfactants and solvents with

low molecular weight.

[0012] The impregnation of the wipe consists of:

- Non-ionic, anionic, amphoteric surfactants; or a mixture of any of these;
- Mixture of short chain alcohols, that is, a chain of up to five carbons;
- Synergistic biocide mixture which includes cationic surfactants from the quaternary amonics family with a concentration of between 1% and 15% and glutaraldehyde

[0013] In addition, the impregnation may include water and perfume.

DETAILED EXPLANATION OF THE INVENTION

[0014] In an example of a preferred embodiment, the wipe may include non-ionic surfactants, preferably from the family of ethoxylated fatty alcohols with a concentration between 1% and 15% with a chain of between c 8 and c20 and ethoxylated with between 5 and 10 moles of ethylene oxide.

[0015] It may include, more specifically, for the purpose of more effective cleansing, a concentration of between 1% and 5% of a chain between c12 and c18 and ethoxylated with between 6 and 9 moles of ethylene oxide.

[0016] However, in another example of an embodiment the cleansing wipe could consist of an impregnation based on anionic surfactants preferably with a concentration between 1 and 15%, and preferably chosen from among sodium lauryl sulphate, magnesium lauryl sulphate, magnesium lauryl ether sulphate, calcium lauryl sulphate, calcium lauryl ether sulphate, amonic lauryl sulphate, ammonium lauryl ether sulphate, or mixtures of the foregoing.

[0017] In addition, more specifically and also for more effective cleansing, the anionic surfactants could include a concentration of between 1 and 5% chosen from among those mentioned above, or mixtures thereof.

[0018] The invention also includes those embodiments which consist of a mixture of non-ionic, anionic and amphoteric surfactants in such a way that the percentage of the addition of both is between 1% and 15%, and preferably between 1% and 5%.

[0019] In addition, the mixture of short chain alcohols, would include ethanol or isopropanol or a mixture of both.

[0020] The weight should be appropriate for permitting an adequate consistency of the wipe so that it does not tear during use and which, furthermore, has sufficient absorption, however, said weight should be low enough to ensure that it can be disposed of in the toilet. For this purpose the weight of the layer of an example of an embodiment could be between 10g/m² and 80g/m². More specifically, the weight may be within a range of 40g/m² and 60g/m².

[0021] The impregnation should be adequate for the

wipe to be sufficiently wet to permit the requisite cleaning and disinfection; however, it should also enable rapid drying of the surface to be cleaned, as it has to be used immediately by the user. The rapid drying process would also be related to the absorption capacity of the wipe. In order to achieve the adequate degree of impregnation, each cellulose layer could be impregnated with between 1g and 5 g of product, preferably between 2.5g and 4g.

[0022] The wipe may have, for example, a size of 200m x 200m which would permit it to carry out its function correctly, as well as being easily disposed of in the toilet and also easily carried by the user.

[0023] In another example of an embodiment, the wipe may have a form similar to a glove or a mitt, or it may be joined to an element having such form.

[0024] It is considered that the essential elements of the invention conform to claim 1, as well as the particular modes of embodiment resulting from dependent claims 2 to 15, which are incorporated by reference in this description.

Claims

1. Cleansing wipe for toilets, **characterised in that** it comprises a layer of cellulose the impregnation of which consists of:

- Non-ionic, anionic, amphoteric surfactants; or a mixture of any of these;
- Mixture of short chain alcohols;
- Biocide mixture which includes cationic surfactants from the quaternary amonics family with a concentration of between 1% and 15% and glutaraldehyde

2. Cleansing wipe for toilets, according to claim 1, **characterised in that** it includes water and perfume.

3. Cleansing wipe for toilets, according to any of the previous claims, **characterised in that** it includes non-ionic surfactants, preferably from the family of ethoxylated fatty alcohols with a concentration between 1% and 15% with a chain of between ethoxylated c 8 and c20 with between 5 and 10 moles of ethylene oxide.

4. Cleansing wipe for toilets, according to claim 3, **characterised in that** the non-ionic surfactants from the family of ethoxylated fatty alcohols have a concentration between 1% and 5% with a chain of between ethoxylated c 8 and c20 with between 6 and 9 moles of ethylene oxide.

5. Cleansing wipe for toilets, according to claims 1 or 2, **characterised in that** it includes anionic surfactants with a concentration between 1 and 15% preferably chosen from among sodium lauryl sul-

phate, magnesium lauryl sulphate, magnesium lauryl ether sulphate, calcium lauryl sulphate, calcium lauryl ether sulphate, amonic lauryl sulphate, lauryl ether sulphate of ammonia, or mixtures of the foregoing.

6. Cleansing wipe for toilets, according to claim 5, **characterised in that** the anionic surfactants consist of a concentration between 1% and 5%.

7. Cleansing wipe for toilets, according to claims 1 or 2, **characterised in that** the anionic surfactants consist of a concentration between 1% and 15%.

8. Cleansing wipe for toilets, according to claim 7, **characterised in that** the amphoteric surfactants consist of a concentration between 1% and 5%.

9. Cleansing wipe for toilets, according to any of the previous claims, **characterised in that** it consists of a mixture of at least two surfactants from among:

- non-ionic surfactants,
- anionic surfactants,
- amphoteric surfactants,

so that the percentage of the sum of surfactants of this mixture is between 1% and 15%.

10. Cleansing wipe for toilets, according to claim 9, **characterised in that** the surfactant mixture has a concentration between 1% and 5%.

11. Cleansing wipe for toilets, according to any of the previous claims, **characterised in that** the mixture of short chain alcohols includes ethanol or isopropanol, or a mixture of both.

12. Cleansing wipe for toilets, according to any of the previous claims, **characterised in that** the weight of the cellulose layer is between 10g/m² and 80g/m².

12. Cleansing wipe for toilets, according to claim 12, **characterised in that** the weight of the cellulose layer is between 40 g/m² and 60 g/m².

14. Cleansing wipe for toilets, according to any of the previous claims, **characterised in that** each cellulose layer is impregnated with between 1g and 5g of the product, preferably between 2.5g and 4 g.

15. Cleansing wipe for toilets, according to any of the previous claims, **characterised in that** it has a form similar to a glove or mitt or is joined to an element having such form.



EUROPEAN SEARCH REPORT

Application Number
EP 08 38 1036

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	AU 72440 87 A (STERLING DRUG INC) 12 November 1987 (1987-11-12) * page 11, line 19 - line 21; claims 1-10; examples 1-10 *	1-4, 11-15	INV. C11D3/00 C11D3/20 C11D17/04
Y	US 5 252 606 A (MARTIN HOWARD [US]) 12 October 1993 (1993-10-12) * column 2, line 5 - line 52 *	1-4, 11-15	
Y	* column 3, line 24 - line 27; claim 1 *	1,5,7-10	
A	GB 2 330 765 A (ILLINOIS TOOL WORKS [US]) 5 May 1999 (1999-05-05) * page 6, lines 1-4,29-33; claims 1-3,5,7; example 2 * * page 8, line 17 - line 24; examples 2,3,6,7 * * page 7, line 1 - line 5 *	1-15	
Y	US 6 410 499 B1 (JULEMONT JEAN [BE] ET AL) 25 June 2002 (2002-06-25) * claims 1,3,8,9 *	1,5,7-10	
A	EP 1 661 586 A (BODE CHEMIE GMBH & CO [DE]) 31 May 2006 (2006-05-31) * paragraphs [0006], [0007], [0018], [0030], [0034], [0035], [0041]; claims 1,8-11; example DM2 *	1-3	C11D A01N
The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 20 March 2009	Examiner Loiselet-Taisne, S
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	

4

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 08 38 1036

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report.
The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

20-03-2009

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
AU 7244087	A	12-11-1987	AU 600269 B2	09-08-1990
US 5252606	A	12-10-1993	US 5322856 A	21-06-1994
GB 2330765	A	05-05-1999	CA 2253159 A1	03-05-1999
			US 5962001 A	05-10-1999
US 6410499	B1	25-06-2002	AT 312903 T	15-12-2005
			CA 2452873 A1	23-01-2003
			DE 60208032 T2	17-08-2006
			EP 1404802 A1	07-04-2004
			ES 2253543 T3	01-06-2006
			PT 1404802 T	31-05-2006
			US 6380152 B1	30-04-2002
			US 6429182 B1	06-08-2002
			WO 03006600 A1	23-01-2003
			US 6436892 B1	20-08-2002
			US 6429183 B1	06-08-2002
			US 6346506 B1	12-02-2002
EP 1661586	A	31-05-2006	DE 102004058143 A1	24-05-2006

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82