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**Datasheet for the decision
of 4 December 2017**

Case Number: T 1034/14 - 3.3.06

Application Number: 08707996.8

Publication Number: 2118256

IPC: C11D3/40

Language of the proceedings: EN

Title of invention:
SHADING COMPOSITION

Patent Proprietor:
Unilever PLC / Unilever N.V.

Opponent:
The Procter & Gamble Company

Headword:
Pigment and dye shading/UNILEVER

Relevant legal provisions:
EPC Art. 56

Keyword:
Inventive step - no (Main Request) - yes (1st Auxiliary
Request)

Decisions cited:

T 1188/00

Catchword:



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Case Number: T 1034/14 - 3.3.06

D E C I S I O N
of Technical Board of Appeal 3.3.06
of 4 December 2017

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted on 10 March 2014 rejecting the opposition filed against European patent No. 2118256 pursuant to Article 101(2) EPC.**

Composition of the Board:

Chairman B. Czech
Members: G. Santavicca
 S. Fernández de Córdoba

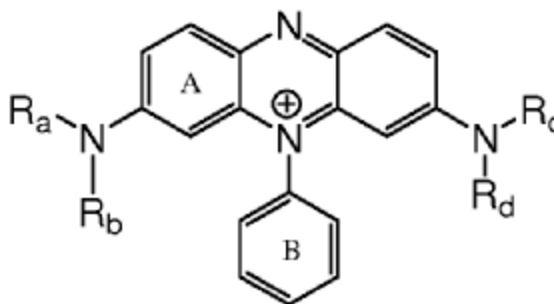
Summary of Facts and Submissions

- I. The appeal lies from the decision of the Opposition Division to reject the opposition against European patent n° 2 118 256.
- II. Independent Claims 1 and 12 of the patent as granted read as follows:

"1. A laundry detergent composition comprising:

- (a) from 2 to 90% of a surfactant;
- (b) from C.0001 [sic] to 0.5% of a blue organic pigment or a violet organic pigment; and,
- (c) at least 0.0001 to 0.05% of one organic dye selected from:

blue or violet direct dyes; blue or violet hydrophobic dyes; blue or violet reactive dye; blue or violet basic dye; blue or violet conjugate; and, acid dye selected from:
(i) azine dyes, wherein the dye is of the following core structure:



wherein R_a , R_b , R_c and R_d are selected from: H, an [sic] branched or linear C1 [sic] to C7-alkyl chain, benzyl a [sic] phenyl, and a [sic] naphthyl;
the dye is substituted with at least one SO_3^- or $-COO^-$ group; the B ring does not carry a negatively charged group or salt thereof;
and the A ring may further substituted [sic] to

form a naphthyl; the dye is optionally substituted by groups selected from amine, methyl, ethyl, hydroxyl, methoxy, ethoxy, phenoxy, Cl, Br, I, F and NO₂ and, (ii) acid violet 17, acid violet 50, acid black 1, acid red 51, acid red 17 and acid blue 29."

"12. A domestic method of treating a textile, the method comprising the steps of:

(i) treating a textile with an aqueous solution of the laundry detergent composition as defined in any one of claims 1 to 10, the aqueous solution comprising from 1 ppb to 5 ppm of the pigment, and from 1 ppb to 1 ppm of at least one other dye selected from: hydrophobic dyes, acid dyes and direct dyes; and from 0.2 g/L t 3 g/L of a surfactant; and,

(ii) rinsing and drying the textile."

III. The patent was opposed in its entirety on the grounds of lack of novelty and inventive step.

The items of evidence relied upon include

D1: EP 1 586 629 A1;

D4: WO 2006/032327 A1;

D9: Annex 1, Supplementary Example 1, filed by the Patent Proprietors with letter of 19 December 2012;

D10: US 3,931,037 A;

D11: US 5,529,710 A;

D11a: Excerpt from Wikipedia, printed 26 November 2013, "Phthalocyanine Blue BN"; and

D22: "Annex 1 (Further Experimental Data)" filed by the Opponent with letter of 17 January 2014.

- IV. In the decision under appeal, the Opposition Division came to the following conclusions:
- (a) Document D1 did not directly and unambiguously disclose the subject-matter of Claim 1 of the patent in suit, which thus was novel.
 - (b) The patent in suit solved, "over the whole scope of the claims", the technical problem of providing "a shading system that provides maximum shading whiteness benefits over a range of fabrics", and not merely the problem of providing alternative laundry compositions.
 - (c) None of the prior art documents invoked by the Opponent "hint to the problem or solution of the opposed patent".
 - (d) Thus, the claimed subject-matter was not obvious over the cited prior art.

V. In its statement setting out the grounds of appeal, the Appellant (Opponent) relied *inter alia* on the data in D22, in questioning the relevance of D9 on

D23: "Opponent's Second Experimental Report", dated 15 September 2014, by Mr Euan Magennis, and,

to illustrate that it was known in the art to blue laundry using an organic pigment, on

D24: Louis Chalmers, "Chemical Specialties Domestic and Industrial", Second Edition, 1978, Vol.1, Chapter 7; page 146.

The Appellant essentially maintained that the subject-matter of Claim 1 lacked an inventive step taking either D1, D10 or D11 as the closest prior art, the technical problem solved consisting merely in providing a further composition for shading white fabrics.

VI. In its response dated 25 November 2014, the Respondent/Patent Proprietor defended the patent in its granted version but also submitted four sets of amended claims as its 1st to 4th Auxiliary Requests. In rebutting the inventive step objections raised, it considered D4 to be the most appropriate starting point for the assessment of inventive step, and that the problem solved consisted in providing improved laundry detergent compositions shading more uniformly mixed cotton and polyester fabrics.

VII. With the summons to oral proceedings, the Board issued a communication *inter alia* expressing its provisional opinion that it was document D4 that appeared to represent the closest prior art, and calling into question whether an improvement over the compositions of D4 could be validly invoked.

VIII. With letter dated 17 November 2017, the Respondent submitted

D25: Further "Experimental Report"

supposed to further corroborate its position regarding inventive step by making an experimental comparison to Example 6 of D4.

IX. In its letter of 29 November 2017, the Appellant considered that D25 should not be admitted into the proceedings pursuant to Article 13(3) RPBA in view of its belated filing and lack of relevance.

It submitted that in view of the experimental data on file, the technical problem actually solved merely consisted in providing a further laundry composition suitable for shading and whitening mixed fabrics.

The composition of Claim 1 at issue was obvious, even when D4 was taken as the closest prior art, in particular considering that D1, D10 or D24 all hinted at the incorporation of organic pigments into the laundry compositions.

The claims of the auxiliary requests were more limited in terms of the pigment component only, and were thus likewise objectionable for lack of an inventive step.

X. Oral proceedings were held on 4 December 2017.

The debate first focused on the obviousness of the subject-matter of Claim 1 of the Main Request in the light of D4. Following the indication, by the Board, that this subject-matter appeared to lack inventive step, the Respondent withdrew its pending First Auxiliary Request and replaced it by a new "1st Auxiliary Request" consisting of amended Claims 1 to 9.

The Appellant submitted that the subject-matter of Claim 1 of this new 1st Auxiliary Request did also not involve an inventive step in the light of D4. This issue was controversially debated. No further objections were raised by the appellant against the new 1st Auxiliary Request.

XI. The new 1st Auxiliary Request filed at the oral proceedings comprises no method claims, and an amended independent product Claim 1 differing from Claim 1 as granted in that it no longer comprises some typing errors but comprises the following appended features, defining more specifically the "*organic pigment*":

"wherein the organic pigment is selected from: pigment violet 1, 1.1, 1:2, 2, 3, 5:1; 13, 23, 25, 27, 31, 37,

39, 42, 44, 50 and Pigment blue 1, 2, 9, 10, 14, 18, 19, 24:1, 25, 56, 60, 61, 62, 66, 75, 79 and 80".

Dependent claims 2 to 9 of this request are directed to more specific such compositions.

XII. Final requests

The **Appellant** (Opponent) requested that the decision under appeal be set aside and that the patent be revoked.

The **Respondent** (Patent Proprietor) requested that the appeal be dismissed (Main Request) or, in the alternative, that the patent be maintained on the basis of the claims according to the First Auxiliary Request filed during the oral proceedings, or on the basis of the claims according to one of the Third or Fourth Auxiliary Requests filed with letter dated 25 November 2014.

XIII. The arguments of the **Appellant** of relevance for the present decision can be summarised as follows:

Main Request - Lack of inventive step

D4 (or any of D1, D10 and D11) could be taken as the closest prior art for the assessment of inventive step. In particular, Example 6 of D4 concerned a laundry treatment composition comprising a combination of dyes for shading (enhancing whiteness) of a polyester:cotton test cloth.

D4 moreover generally disclosed (page 4, lines 9 to 11) that it was known that "shading of white garments may be done with any colour depending on consumer preference. ... preferred dyes or mixture of dyes are

ones that give a blue or violet shade on white polyester". Admittedly, D4 did not mention any organic pigment for shading.

No improvement whatsoever, let alone in terms of more even shading as compared to such a composition, had been proven by the Patent Proprietor. The patent itself did not mention that the claimed compositions were supposed to be improved, in terms of a more even shading obtainable as compared to the use of compositions acknowledged as prior art in the description, see paragraphs [0004], [0006] (concerning D4) and [0008].

There was no mention in the patent in suit of shading that was "more even" (allegedly also meaning "more uniform") over a range of fabrics.

D22 showed that no (more) uniform shading was obtained with the compositions tested in D9, whilst D23 showed that the achievement of a more uniform shading across the whole breadth of Claim 1 was not plausible.

Finally, only one pigment had been tested according to D25, and the results obtained could not possibly make it plausible that an improvement would be achieved across the whole breadth of the claim, i.e. for all pigments encompassed in combination with all possible dyes (e.g. hydrophobic or conjugates), even accepting (*arguendo*) the argument that all pigments were suitable for shading due to their similarity in structure.

The technical problem effectively solved could thus merely be seen in providing a further laundry detergent composition suitable for shading mixed fabrics.

The person skilled in the art seeking to solve this problem would have considered obvious the inclusion of a pigment in the composition of D4. D24 (page 146), illustrating relevant common general knowledge in the

field of whitening of laundry fabrics taught (page 146, third and fourth paragraphs) that it had been "customary to correct [the] yellowish tint [of fabrics] by 'blueing' with an ultramarine pigment". i.e. an inorganic pigment), "or, in recent years, Monastral Blue (copper phthalocyanine)", i.e. an organic pigment. The fact that D24 mentioned that the use of this pigment "lowers the brightness of the white reflectance" did not deter the person skilled in the art from nevertheless using this pigment, considering that this unwanted effect could be compensated by using optical brightening agents. According to D24 (page 146, last paragraph), "when optical brightening agents are used, yellowness is neutralized by a positive increase in the reflectance of blue light rays". The use of optical brightening agents was not excluded by the wording of Claim 1 at issue, and they were *de facto* preferably used also in the compositions according to the patent in suit (paragraph [0068]). The information content of D24 thus supplemented the teaching of D4 in the sense that it was well known that organic pigments were substantive to fabrics and that it was generally known that they could be used in laundry compositions for shading, as proposed in the patent in suit.

Moreover, the cited prior art, i.e. D1 (paragraph [0016]: "mixtures"); paragraph [0019]: "Monastral Violet = Violet 19") and D10 (Column 1, lines 10 to 13, and Column 2, line 52: "Phthalocyanine Blue")), confirmed that organic pigments had been used together with dyes as shading agents.

Therefore, the claimed composition was obvious.

1st Auxiliary Request

The more limited subject-matter of Claim 1 was also obvious in the light of D4. The person skilled in the

art knew that organic pigments were suitable for shading laundry. Moreover, as submitted by the Respondent, they all comprised benzene rings, i.e. had a similar structure. In particular, pigments suitable for shading were mentioned in D1 and D10. No special effect attributable to using a different pigment than Monastral Blue (mentioned in D24) had been proven. Using Pigment Violet 23, mentioned in D11, albeit for whitening detergent granules, was another particular option available to the person skilled in the art. Therefore, it would also have been obvious to the person skilled in the art to use other organic pigment than that of D24, e.g. Pigment Violet 23, in the composition of D4.

XIV. The counter-arguments of the **Respondent** of relevance for the present decision can be summarised as follows:

Main Request

D4, in particular its Example 6, was the closest prior art for the purpose of assessing inventive step. The composition illustrated by Example 6 of D4 did not include any organic blue or organic violet **pigment**, and D4 did not mention the use of pigments for shading at all.

D25 showed that, compared to D4, an improved evenness of shading was achieved. Improved evenness, as also derivable from the patent in suit, meant a more similar whiteness over a range of mixed fabrics.

The Appellant, who had the burden to disprove that, had not brought forward sufficient and convincing evidence. Indeed, the evidence submitted by the Appellant, at least D23 (Opponent's Second Experimental Report), was not a correct repetition of D9, the latter showing that

a more even shading was obtainable on a whole range of fabrics, so that no conclusion could be drawn from it. Hence, at least the benefit of the doubt had to be in favour of the Respondent.

Even if the technical problem were merely seen in the provision of a further composition for laundering and shading, the claimed solution was not obvious, since D4 did not hint at adding a pigment in a composition already containing a combination of shading dyes.

The fact that D1 generally referred to "dyes, pigments, photobleaches and mixtures thereof" (page 3, line 35) did not specifically hint at a mixture of dye and pigment, but also to a number of options not being a mixture of a dye with a pigment.

D10 (column 2, lines 32 to 34) mentioned a "dye or pigment", but not a mixture thereof.

D24 mentioned only one organic shading pigment (Monastral blue), but also warned of detrimental effects associated with its use. D24 was thus irrelevant.

Hence, starting from a composition according to D4, i.e. comprising two shading dyes, the skilled person would not have seen any benefit in adding an organic pigment thereto, let alone the one mentioned in D24. More pronounced shading was not necessarily beneficial. Therefore, the claimed laundry composition was not obvious in the light of the D4, even considering also D24, D1 or D10.

1st Auxiliary Request

The new 1st Auxiliary Request filed at the oral proceedings corresponded to the Second Auxiliary Request on file, but no longer comprised the method claims that had been objected to by the Appellant. The amended claims were based on the claims as granted and were clearly allowable.

As to inventive step, the argument that the skilled person generally knew, or knew from D1 and D10, that (all) organic pigments were suitable for shading was to be rejected as unsubstantiated.

In D11, Pigment Violet 23 was not disclosed as being suitable for shading fabrics. D11 could thus not suggest its incorporation into a detergent compositions as disclosed in D4 as a shading agent for fabrics.

Hence, the claimed laundry composition was not obvious in the light of D4, even taking into account common general knowledge (D24) or other prior art invoked (D1, D10 or D11).

Reasons for the Decision

Main Request - Lack of an inventive step

1. The invention
 - 1.1 The present invention relates to the delivery of pigments and dyes to fabrics (paragraph [0001]), more particularly to laundry detergent compositions comprising blue or violet (shading) colorants (see Claim 1 at issue, point II, *supra*).
 - 1.2 In the description of the patent in suit, the following

is indicated:

Paragraph [0004]: *"In typical washes garments created from 100% cotton, polyester-cotton mixes and 100% polyester are washed together. When acid or direct dyes are used in the washing product to give shading benefits to the 100% cotton garment, the benefits on the polyester-cotton mix garment is lower due to the lower level of cotton. This cannot be compensated for by a higher dye level, as then the 100% cotton garments becomes over shaded ... Similarly for the solvent and disperse dye for polyester."*

Paragraph [0005]: *"Thus there is a need for a shading system that provides maximum shading whiteness benefits over a range of fabrics, for example 100% cotton and cotton polyester, ..., and 100% polyester."*

2. Closest prior art
 - 2.1 The Respondent considers that D4 represents the most appropriate starting point for the assessment of inventive step.
 - 2.1.1 Considering the similarities between the claimed invention and the disclosure of D4 in terms of technical issues addressed and compositions disclosed, the Board has no reason to take a different stance.
 - 2.2 Indeed, D4 also relates to laundry treatment compositions comprising dye (page 1, lines 4 to 26).
 - 2.2.1 In particular, D4 (*loc.cit.*) addresses the "need to maintain the white appearance of [garments comprising polyester fibres]", "such that the aesthetic value is retained as long as possible" and the "need to provide

technology that maintains and enhances the white appearance of polyester cotton comprising garments". D4 emphasises "that any treatment of [mixed-fibre garments] should not be overly selective to one type of fibre over another".

More particularly (see page 3, lines 2 to 5), D4 stresses that "when a garment is of mixed fibres, i.e. polyester cotton, dyes that are substantive to each respective fibre are required because otherwise whiteness across the fibre threads is not maintained".

2.2.2 More particularly, the laundry detergent composition disclosed in D4 comprises, besides surfactant,
- 0.0001 to 0.1 wt% of a hydrophobic dye for shading polyester and
- between 0.0001 to 0.1 wt% of one or more other dyes selected from cotton substantive dyes of the group consisting of hydrolysed reactive dyes, acid dyes and direct dyes (page 2, lines 1 to 7).

2.2.3 Example 6 of D4 illustrates a laundry detergent composition comprising Solvent Violet 13 (i.e. a hydrophobic dye for shading polyester), and Direct Violet 51. The composition is used to wash and shade a 50:50 polyester-cotton cloth. In this example it is, moreover, expressly emphasised that "polyester substantive dye and cotton substantive dyes may be used together to give bigger benefits".

The composition of Example 6 of D4 is thus the most appropriate starting point for the assessment of inventive step.

3. Technical problem according to the Respondent

3.1 The Respondent maintained that the technical problem solved by the claimed subject-matter, also in the light of D4 taken as the closest prior art, was the provision of a composition improved in that it provided a **more even** shading (i.e. a more uniform or similar shading) over a range of cotton, cotton-polyester and polyester fabrics.

3.2 It appears to the Board, that what is meant by the sought-for "*maximum shading whiteness benefits*" mentioned in the patent (paragraph [0005]) is illustrated by e.g. Examples 2 and 5 of the patent. As confirmed by the Respondent at the oral proceedings, the quoted expression refers to nothing more than the similarity in whiteness achieved when subjecting different types of white fabrics, e.g. cotton, polycotton and polyester fabrics, to washing with the detergent composition according to the invention.

4. The solution

As the solution to this technical problem, the patent proposes laundry compositions as defined in Claim 1 at issue, characterised in particular in that they *inter alia* comprise, in addition to the "*organic dye*", "*from 0.0001 to 0.5% of a **blue organic pigment** or a **violet organic pigment***" (emphasis added by the Board).

5. The alleged success of the solution

5.1 The patent in suit, albeit acknowledging D4 as prior art in paragraph [0006], neither mentions nor shows (e.g. by means of comparative data) some improvement in whiteness similarity of washed mixed fabrics, attributable to the differences in terms of composition

between the claimed laundry compositions and compositions according to D4.

- 5.2 In Example 6 of the patent in suit, a comparison is made of the changes in the CIE LAB colour values (in terms of Δ_b^*) of a test cloth washed with a composition comprising either a single direct dye (Direct Violet 9) , a solvent dye (Solvent Violet 13), or both dyes together with and an organic pigment (Pigment Violet 23), the latter composition leading to a much greater Δ_b^* .

However, no comparison is made between a composition comprising two dyes (as disclosed in example 6 D4), and a composition comprising a dye and a pigment as claimed.

- 5.3 An improvement over the compositions of D4 (Point 2.2.3, *supra*) in terms of similarity of the whiteness conferred to the washed garments, as invoked by the Patent Proprietor for the first time in the appeal proceedings, is not derivable in this generality from the patent suit.

- 5.4 According to established case law (see e.g. decision T 1188/00 of 30 April 2003, Reasons 4.5 and 4.9), a Patent Proprietor invoking an improvement for the first time in opposition appeal proceedings has the burden to prove that said improvement is actually achieved across the whole breadth of the independent claim.

In this respect, as regards the improvement invoked, the Patent Proprietor essentially relied on the experimental reports D9 and D25.

- 5.5 Document D9

- 5.5.1 According to D9, a comparison was made between the shading provided to cotton, polycotton and polyester fabric, respectively, when washed with a composition comprising a mixture of a dye and a pigment with a composition comprising either only the dye or only the pigment.
- 5.5.2 This is, however, not a comparison with the closest prior art compositions of D4 (example 6), comprising a mixture of two dyes, one being cotton substantive and the other being polyester substantive.
- 5.5.3 Hence, the Board holds that D9 cannot conclusively show that the technical problem formulated by the Respondent is effectively solved, let alone across the whole ambit of Claim 1 at issue.
- 5.5.4 In view of this finding, documents D22 and D23, provided by the Appellant in an attempt to show that D9 was not conclusive, need not be considered further by the Board.
- 5.6 Document D25
- 5.6.1 D25 contains a comparison between the results obtained using
- a composition comprising 1 ppm of Solvent Violet 13 (a dye being preferentially substantive to polyester, according to D4, page 4, lines 7, 12, 13 and 22) and 0.06 ppm of Direct Violet 51 (a dye being substantive to cotton, see D4, page 11, line 9, in combination with page 22, line 6), i.e. the dyes used according to Example 6 of D4, and
 - the same composition additionally comprising 2 ppm Pigment Violet 23.

According to the results of D25, washing with the composition also comprising the pigment resulted in a lower "spread" value, allegedly indicating more even shading, across the six different test cloths.

5.6.2 However, D25 was criticized by the Appellant because it had been submitted too late to permit a re-working of the experiments made. Moreover, the Appellant called into question the probatory value of D25 arguing as follows:

- A reduced "spread" value, used to quantify this effect for the first time in D9, and not being mentioned at all in the patent in suit, did not necessarily mean a more similar whiteness across a range of fabrics as shown e.g. by D22/D23.
- Furthermore, D25 mentioned a "resin" without giving further details thereof. This resin might, however, act as a binder for the pigment, thus reinforcing the shading.
- Moreover, D25 did not mention all of the values actually measured in the colour measurements, based on which the spread was calculated, which would have permitted the Appellant to at least verify the results obtained.

5.6.3 The Board also notes that D25 only presents results for a single specific composition (in terms of dye, pigment and concentrations) encompassed by Claim 1 at issue.

Claim 1 is, however, so broad as to also encompass, for instance, compositions comprising a pigment and a "hydrophobic dye", i.e. compositions comprising two colorants being both preferentially more substantive to polyester than to cotton, as pointed out by the Appellant at the oral proceedings.

5.6.4 Consequently, even if (*arguendo*) D25 were admitted into the proceedings, it could not possibly be considered to conclusively demonstrate that the improvement invoked by the Respondent is effectively achieved across the whole breadth of Claim 1.

6. Technical problem effectively solved

6.1 Considering the above finding, the technical problem effectively solved must be reformulated in a less ambitious manner. In the light of D4 (example 6) taken as the closest prior art, it can be seen in the provision of a further laundry composition comprising colorants to provide whiteness benefits over a range of fabrics including cotton, polycotton and polyester fabrics.

6.2 At the oral proceedings, it was not in dispute that this less ambitious technical problem is effectively solved by the subject-matter of Claim 1.

6.3 Considering the whitening results obtainable with compositions according to Claim 1 at issue as presented in the examples of the patent in suit, in particular Example 6, the Board has not reason to take another stance.

7. Obviousness

7.1 Hence, it remains to be assessed whether the person skilled in the art, starting from D4 (example 6) and seeking to solve the technical problem posed, was induced by the prior art and/or common general knowledge to incorporate an organic blue or violet pigment (in addition to, or in at least partial replacement of one of the two dyes) in a composition as

described in Example 6 of D4, thereby arriving at a composition falling within the ambit of Claim 1 at issue.

7.2 Document D4 taken alone

7.2.1 D4 does not mention the possibility of using a pigment as a (laundry) shading agent, let alone an organic blue or violet pigment suitable for shading mixed-fibre fabrics.

7.2.2 Hence, D4 alone does not provide any motivation or hint orienting the skilled person towards a composition as claimed.

7.3 D4 and common general knowledge

7.3.1 However, according to D24 (page 146, penultimate paragraph), a document indisputably illustrating common general knowledge in the field of detergents and laundry products (see front page), it was well known to correct the yellowish tint left on fabrics by repeated laundry treatments by "blueing", using an ultramarine **pigment**, i.e. an **inorganic** pigment, or, in recent years, using "Monastral Blue" (copper phthalocyanine), i.e. an **organic pigment**, although the use of this latter pigment brought about a noticeable lowering of the brightness of the white reflectance.

7.3.2 Monastral Blue is undisputably a "*blue organic pigment*" within the meaning of Claim 1 at issue, i.e. C.I. Pigment Blue 15:2 (see also document D11a, and paragraph [0021] of the patent in suit).

7.3.3 Hence, the person skilled in the art knew that organic Pigment Blue 15:2 could be used in laundry detergent compositions for blueing fabric on which repeated

laundry treatments had left a yellowish tint. The statement in paragraph [0009] of the patent in suit, which appears to suggest that organic pigments had not previously been used in detergent products for shading garments, is thus somewhat misleading.

7.3.4 It is in dispute whether the known "lowering of the brightness of the white reflectance" when blueing with Monastral Blue mentioned in D24 would have deterred the person skilled in the art from using organic Pigment Blue 15:2 in a composition according to e.g. Example 6 of D4.

i) However, D24 (last paragraph on page 146, first sentence) expressly teaches that yellowness may be neutralised by using optical brightening agents with a possible increase of the reflectance of the blue light rays without damaging the fabric in any way.

ii) The use of such optical brightening agents components is, moreover, not excluded by Claim 1 at issue and even preferred according to the patent in suit (see paragraph [0068]). As apparent from the table of paragraph [0100] of the patent in suit, they are used in all the illustrated formulations A to D (see "Fluorescer").

iii) Last not least, the use of such agents is also contemplated as most preferable in D4 (page 16, line 15 onwards).

7.4 The Board thus concludes that the person skilled in the art, starting from D4 and seeking to solve the less ambitious technical problem posed, would have considered the incorporation of Pigment Blue 15:2, together with optical brightening agent, into a laundry

composition such as the one of Example 6 of D4 as an obvious viable option.

8. In the Board's judgement, the subject-matter of Claim 1 as granted does not, therefore, involve an inventive step.
9. The Respondent's Main Request is, thus, not allowable.

First Auxiliary Request

10. Amended claim request not formally objectionable
 - 10.1 The set of claims at issue differs from the claims as granted in that the method claims are deleted altogether, whereby Claim 2 as granted is incorporated into Claim 1 as granted, the back references in the dependent claims are adapted and some typographic errors are removed.
 - 10.2 The Appellant did not object to the late filing of this request and raised no objection concerning the formal allowability of the amended claims.
 - 10.3 The Board also saw no reason for raising such an objection.
11. Inventive step
 - 11.1 The Appellant however submitted that despite being more limited in ambit, the subject-matter of the claims at issue did still not involve an inventive step in the light of D4.
 - 11.2 The amendment made to Claim 1 is not of a nature requiring a change as regards the most appropriate

closest prior art (Points 2 *ff.*, *supra*) or of the formulation of the technical problem effectively solved (Point 4.1, *supra*). This is not in dispute.

11.3 Non-obviousness

11.3.1 Hence it remains to be decided whether a composition according to more restricted Claim 1 at issue was obvious to the person skilled in the art having regard to the state of the art disclosed by D4.

11.3.2 Common general knowledge

Monastral Blue (Pigment Blue 15:2) is no longer encompassed by Claim 1 at issue. D24 does not mention any further organic pigment suitable for blueing fabrics. Hence, the incorporation of one of the other organic pigments specifically defined in Claim 1 at issue would not have been considered an obvious option by the person skilled in the art in the light of common general knowledge as illustrated by D24.

11.4 The Appellant also argued that because of their similarity in terms of structure (all pigments included benzene rings) and of the generally known fact that all pigments were suitable for hueing, the use of each of the pigments listed in Claim 1 was equally obvious.

11.4.1 However, in this respect, no corroborating evidence was provided by the Appellant, showing e.g. that the presence of a benzene ring was, as such, sufficient to ensure a similarity of function, thus of use (shading). Moreover, this position is contested by the Respondent. Hence, the Board disregarded this argument devoid of *prima facie* plausibility.

11.5 Documents D1 and D10

11.5.1 D1 (claim 1) concerns granular (paragraph [0030]) detergent compositions comprising a colored detergent ingredient. More particularly, the colored detergent ingredient of D1 is "a hueing agent" incorporated "to bring color to the fabric **or** wash solution" (paragraph [0014]). The hueing agent "provides white fabrics with a light off-white tint, modifying whiteness appearance and acceptance (Blueish white pinkish white)" by being deposited on the fabrics and is "selected from dyes, pigments, photobleaches and mixtures thereof" (paragraphs [0015] and [0016]).

The only hueing agent used according to the examples (paragraphs [0046] to [0049]) of D1 is the expressly "preferred" Ultramarine Blue (paragraph [0019], i.e. the inorganic pigment well known as hueing agent. The only other blue or violet pigment expressly mentioned is "Monastral Violet", an organic pigment which is, however, no longer encompassed by claim 1 at issue. D1 (paragraph [0001] essentially focuses on providing colorless solid detergent compositions, i.e. compositions "comprising colored ingredients which a added at such particle size, color and level that they are not noticed by consumers". D1 pays no particular attention to the shading effects actually achieved, and does not touch upon the issue of providing a detergent composition suitable for obtaining whitening benefits when washing different fabrics.

11.5.2 Document D10

D10 (title, claim 1) concerns the preparation of uncolored granular detergent composition comprising a

coloring material characterized by its ability provide a distinct color to the washing solution (column 2, lines 5 to 7). Depending on the coloring material chosen, the latter **may** additionally provide a benefit to the washed fabrics, for example effective fabric bluing to improve apparent fabric whiteness by counter acting yellow discoloration (column 2, lines 8 to 14). The coloring ingredient of D1 may be a water-soluble dye **or** a water-insoluble pigment (column 2, lines lines 30 to 34). Three pigments are specifically mentioned, i.e. Phthalocyanine Green (C.I. 74260), "Phthalocyanine Blue" (i.e. Monastral Blue or Pigment Blue 15:2) and Ultramarine Blue. D10 contains only one example wherein a water soluble dye is used (Polar Brilliant Blue GAW), which is a fabric blueing agent (D10: claim 3), but wherein the bluing actually achievable when washing fabrics is not looked at. The only pigment mentioned in claim 3 of D10, which specifically refers to coloring materials which are fabric bluing agents, is the inorganic pigment Ultramarine Blue.

This document is essentially focusing on the main aim of providing uncoloured (white) detergent granules providing a colored wash solution. It does not touch upon the issue of shading/blueing different white fabrics using a same detergent composition. Moreover, the only pigment specifically suggested for hueing is the inorganic Ultramarine Blue, well known for that purpose and the other only organic blue or violet pigment mentioned in D10 is no longer encompassed by Claim 1 at issue.

- 11.5.3 Considering the specific disclosures of D1 and D10 and the fact that neither D1 nor D10 addresses the issue of providing a laundry detergent composition for washing and shading white fabrics made of different types of

fibre material, none of these two documents qualifies as closest prior art or suggests, excluding hindsight considerations, the incorporation of one of the organic pigments listed in Claim 1 at issue into a composition according to D4.

11.6 Document D11

11.6.1 D11 (abstract, column 1, lines 28 to 30, column 2, lines 26 to 29, 41 and 42, and 46 to 53) is concerned with the provision of high active (high concentration of surfactant) detergent granules comprising a dye or optical brightener in order to nevertheless provide these **granules** with a **white** appearance. D11 does not address hueing of white garments upon wash.

11.6.2 Therefore, the Board holds that D11 neither qualifies as closest prior art nor suggests to incorporate the organic pigment "Pigment Violet 23" mentioned therein into a detergent composition supposed to provide whiteness to garments from a range of fabrics (cotton, polyester and cotton-polyester).

11.7 In the Board's judgment, a composition falling within the ambit of Claim 1 at issue was thus not obvious to the person skilled in the art in the light of the prior art invoked by the Appellant. The subject-matter of Claim 1, and of Claims 2 to 9 dependent thereon therefore involves an inventive step (Article 52(1) and 56 EPC).

Conclusion

12. The claims according to the First Auxiliary Request are not objectionable on the grounds invoked by the Appellant.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the department of first instance with the order to maintain the patent with the claims according to the First Auxiliary Request, as filed during the oral proceedings, and a description to be adapted where appropriate.

The Registrar:

The Chairman:



D. Magliano

B. Czech

Decision electronically authenticated