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## Datasheet for the decision

 of 5 July 2007Case Number:
Application Number:
Publication Number:
IPC:
Language of the proceedings: EN
Title of invention:
Solid cosmetic composition

## Patent Proprietors:

THE PROCTER \& GAMBLE COMPANY
Opponents:
L'ORÉAL
Headword:

Relevant legal provisions:
EPC Art. 54, 56
Keyword:
"Novelty (yes) - multiple selections - not directly and unambigously disclosed"
"Inventive step (no) - closest prior art - problem and solution - obvious further composition"

Decisions cited:

Catchword:

DECISION<br>of the Technical Board of Appeal 3.3.07<br>of 5 July 2007

| Respondents: <br> (Patent Proprietors) | THE PROCTER \& GAMBLE COMPANY One Procter \& Gamble Plaza Cincinnati, Ohio 45202 (US) |
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| Decision under appeal: | Interlocutory decision of the Opposition Division of the European Patent Office posted 2 August 2002 concerning maintenance of European patent No. 0794760 in amended form. |

Composition of the Board:
Chairman: S. Perryman
Members:
B. ter Laan
G. Santavicca

## Summary of Facts and Submissions

I. Mention of the grant of European patent No. 0794760 in respect of international patent application PCT/US95/01848 (filed on 14 February 1995 and published on 13 June 1996 under No. W096/17583), was published on 6 May 1999. The patent was filed and granted on the basis of the same seven claims, of which claims 1 to 4 read:
"1. A solid cosmetic composition comprising 0.1-10 wt\% to the entire composition a spherical silica having an average particle size of 3-16 $\mu \mathrm{m}$ wherein said spherical silica is adsorbed with moisturizing agent."
"2. The solid cosmetic composition according to Claim 1 wherein said moisturizing agent is a polyhydric alcohol."
"3. The solid cosmetic composition according to Claim 1 or 2 wherein said the surface of the silica, after being treated with moisturizing agent, is hydrophobically modified by treating with silicone."
"4. A solid cosmetic composition comprising:
(1) 40-99 wt\% powder component; and
(2) 0.1-60 wt\% binder base;
wherein said powder component comprises:
(a) a spherical silica having an average particle size of $3-16 \mu \mathrm{~m}$; and
(b) an agglomerate having a particle size of 100-2000 $\mu \mathrm{m}$ made of primary particles of spherical acrylate cross-linked copolymer
having an average particle size of not more than $1 \mu \mathrm{~m}$;
wherein the weight ratio of said spherical silica to said spherical acrylate crosslinked polymer agglomerate is 1:9-9:1, and wherein the total of said spherical silica and said spherical acrylate cross-linked copolymer agglomerate is 0.1-10 wt\% to the entire composition."

Claims 5 to 7 were claims dependent on claim 4.
II. A notice of opposition against the granted patent was filed on 7 February 2000, in which the revocation of the patent in its entirety was requested on the grounds of lack of novelty and inventive step and insufficient disclosure, as set out in Articles 100(a) and 100(b) EPC.

The opposition was, inter alia, supported by:

D3 US-A 5225186
D4 EP-A-0 511092
D5 EP-A-0 486394
D7 EP-A-0 529396
D12 Product Sheet Silcron G-640 (Milennium Speciality Chemicals)
D14 Bulletin Technique Pigments (Degussa, No. 49, June 1980).
III. In an interlocutory decision posted on 2 August 2002, the opposition division decided that the patent in the amended form based on the third auxiliary request filed during the oral proceedings on 8 July 2002, consisting
of four claims corresponding to granted claims 4 to 7, fulfilled the requirements of the EPC, but the main, first and second auxiliary requests did not.

The objection of insufficiency was not considered to have been made out, in the absence of any evidence filed by the opponent. The other reasoning relating to the refused requests can be summarized as follows.
(a) Claim 1 of the main request before the opposition division read:
"1. A solid cosmetic composition comprising 0.1-10 wt\% to the entire composition a spherical silica having an average particle size of $3-16 \mu \mathrm{~m}$ wherein said spherical silica is adsorbed with moisturizing agent, wherein said moisturizing agent is a polyhydric alcohol."

The claim, being a combination of claims 1 and 2 as filed and as granted, met the requirements of Article 123 EPC, but was not novel over D4 which referred to "Silcron G640" silica particles whose particle size was $6 \mu \mathrm{~m}$, as stated in document 12.
(b) Claim 1 of the first auxiliary request read:

> "1. A solid cosmetic composition comprising $0.1-10$ wt\% to the entire composition a spherical silica having an average particle size of $3-16 \mu m$ wherein said spherical silica is adsorbed with moisturizing agent, wherein said moisturizing agent is a polyhydric alcohol and wherein, when the moisturizing agent is glycerine, the weight
ratio of spherical silica to glycerine is within the range of 95:5 to 50:50."

The claim, being a based on a combination of claims 1 and 2 as filed and as granted, together with a further restriction when the moisturizing agent is glycerine (based on page 4, lines 9 to 12, and all the examples as originally filed), met the requirements of Article 123 EPC, but was, like the main request, for moisturizing agents other than glycerine not novel over D4.
(c) Claim 1 of the second auxiliary request read:
"1. A solid cosmetic composition comprising 0.1-10 wt\% to the entire composition a spherical silica having an average particle size of $3-16 \mu \mathrm{~m}$ wherein said spherical silica is adsorbed with glycerine and the weight ratio of spherical silica to glycerine is within the range of $95: 5$ to 50:50."

The claim, being based on a combination of claims 1 and 2 as filed and as granted, together with a further restriction to the moisturizing agent being glycerine at a specific weight ratio (based on page 4, lines 9 to 12, and all the examples as originally filed), met the requirements of Article 123 EPC.

This claim was limited to the moisturizing agent being glycerine with the weight ratio of spherical silica to glycerine being in the range of $95: 5$ to 50:50 (35:1 [sic] to 1:1). D4 however, disclosed on page 5, lines 17 to 19, a range of 0.1 to 10 ,
preferably 0.5 to 5, for the ratio of microspheres to hydrophilic phases (page 5, lines 17-19). Since at least the lower value of D4 overlapped with a range of the patent in suit, the opposition division concluded that the requirements of Article 52(1) and 54(2) EPC were not met for this request.
(d) Claim 1 of the third auxiliary request corresponded to claim 4 as filed and as granted (see point I. above) and the other claims 2-4 of this request where dependent on this claim 1, corresponding to claims 5-7 as filed and as granted. The claimed subject matter was novel over all the citations. Vis-à-vis D5 the agglomerate particle size of 100-200 microns, the silica average particle size of 3-16 microns, the specified weight ratio silica : acrylate and the total weight of silica/acrylate appeared to be novelty rendering features.

Starting from D5 as closest prior art, as argued for by the opponent, that document referred to a similar problem as the patent in suit of providing a composition that suppresses oil shining. Tables 1 to 4 on pages 6 to 8 of the patent in suit satisfied the opposition division that that problem had been solved. As none of the citations, including D7 which had been particularly relied on by the opponent, gave any incentive to select the specific weight ratio silica : acrylate, nor the specific total weight of silica/acrylate, nor the average particle size claimed, an inventive step had to be recognized.
IV. On 10 October 2002, the patent proprietor (appellants) lodged an appeal against the above decision. The prescribed fee had been paid on 8 October 2002. With the statement setting out the grounds of appeal filed on 6 December 2002, a set of six claims was submitted as the main request.

Claim 1 corresponded to claim 1 of the second auxiliary request before the opposition division (see point III(c) above).
V. By communication dated 23 February 2007 the parties were summoned to oral proceedings. In a communication dated 15 May 2007 in preparation for oral proceedings, the Board raised, inter alia, the question, even if Claim 1 of the sole request might be considered novel over D4, which document should be regarded as the closest prior art and which problem could be regarded as solved in relation to it. There was no evidence in the application or on the file that something falling within the current claims was necessarily suitable for any purpose, let alone for reducing oil shining or achieving moisturizing to any measurable extent. In the absence of comparative tests to prior art compositions which would allow the Board to deduce that an improvement will be achieved, the problem to be solved would rather have to be formulated in less ambitious terms, such as providing an alternative or a further solid cosmetic composition. Then D4, which related to porous microspheres for use in cosmetics, was also a possible starting point. On page 5, lines 17 to 19, of D4, a ratio of 0.1 to 10 times was suggested as an alternative to the specific silica : glycerine ratio of 1:2 mentioned in example 8 of D4. If the problem was
merely to provide alternatives it would be enough for obviousness if some of the many alternatives to the specific examples of D4 that would be suggested to a skilled person fell within the claim.
VI. The appellants made no response to this communication other than informing the Board by facsimile letter of 14 June 2007 that the appellants would not be represented at the oral proceedings scheduled to take place on 5 July 2007.

The respondents made no submissions in writing on the substance of the case, but indicated that they would attend the oral proceedings.
VII. Oral proceedings before the Board were held on 5 July 2007 in the absence of the appellants in accordance with Rule 71(2) EPC.
VIII. The appellants' written arguments given in the Grounds of Appeal can be summarised as follows:
(a) D4 disclosed many possibilities for the various features of the present claims. In the only example in which silica was used, no cosmetic composition as now claimed was mentioned. In order to arrive at the subject-matter now being claimed, quite a number of selections and combinations were necessary from amongst many disclosed options and broad ranges. Therefore, the claimed features had, in their present combination, not been clearly and unambiguously disclosed, so that the claimed subject-matter was novel.
(b) Regarding inventive step, the patent in suit aimed at balancing oil absorption as well moisturization of the skin. D4 did not qualify as the closest prior art document since the compositions it described served a different purpose. D3 also mentioned the problem of oil absorbency, but its main purpose was different. D7, which discussed both the problem of removing exudates and delivering actives and which also mentioned the problem of water loss from the skin, was therefore the closest prior art document.

However, D7 did not teach to use silica particles of the size required according to present claim 1, which size solved the oil absorbency problem and affected the amount of glycerine adsorbed, as stated in the patent in suit, and there was also no teaching that the glycerine was adsorbed on the silica in the amount now required. Combinations of D7 with other documents, in particular D1 and D4, for which the skilled person would see no reason in the first place, would not lead in an obvious way to the claimed subject-matter.

If one started from D4, the problem to be solved would be the optimisation of moisturisation within the limits of manufacturing capability. That problem was solved by the ratio glycerine : silica. D4 did not contain any teaching as to the solution of the problem, nor to use glycerine or the ratio now being claimed. A combination with other documents would also not lead to the claimed subject-matter.

Therefore, the claimed subject-matter was inventive.
IX. The respondents' arguments given during the oral proceedings can be summarized as follows:
(a) As to novelty, D4 in its preferred embodiments clearly disclosed all the claimed features and therefore destroyed the novelty of the claimed subject-matter.
(b) Regarding inventive step, D7 did not describe a solid composition and D3 concerned the delivery of substances to the skin rather than removing them from it. D4, which had the most features in common with the patent in suit, and was the most promising starting point, was therefore the closest document. The problem of suppressing oil shining without affecting a natural finished appearance and also to provide a moisturizing effect as described in the patent specification, had not been solved by the composition according to present claim 1, so that the problem had to be reformulated to providing an alternative composition. D4 provided all the features of the present claims and the skilled person would not have hesitated to put those together. The claimed subject-matter was therefore not inventive.
X. The appellants had requested in writing that the decision under appeal be set aside and that the patent be maintained on the basis of claims 1 to 6 filed with the statement setting out the grounds of appeal dated 6 December 2002.

The respondents requested that the appeal be dismissed.

## Reasons for the Decision

1. The appeal is admissible.

Novelty
2. D4 discloses porous microspheres coated with a perfluorinated oil, a silicon oil or a silicon gum, the coating being fixed at the external surface of said microspheres (claim 1).
2.1 The microspheres according to D4 may have an average particle size below $800 \mu m$, preferably between 0.1 and $300 \mu \mathrm{~m}$ (claim 2). They are spherical or spheroidal and contain a network of pores that are interconnected and open to the outside and which may be filled by a hydrophilic or lipophilic liquid phase (page 2, lines 34 to 37).
2.2 Of the microspheres useful for the purposes of D4, ten are specifically mentioned in a list on page 2, lines 38 to 51, amongst which silica particles such as "SILCRON G 640", sold by the SCM Company. According to D12, the median particle size of Silcron G-640 was 5.9 $\pm 0.7 \mu \mathrm{~m}$. The appellants did not deny that this value fell within the claimed range of an average particle size of 3 to $16 \mu \mathrm{~m}$.
2.3 According to D4 (page 5, lines 10 to 19), the pores of the particles may, before they are coated, be charged with a hydrophilic phase, for example water, a
polyhydroxylic alcohol or mixtures thereof, such as a mixture of water and glycerine or propanediol-1,2 in a ratio of between 0.1 and 10, preferably between 0.1 and 5 , times the mass of the microspheres.
2.4 The coated and optionally charged microspheres of D4 are used in cosmetic compositions, in particular in lipsticks, powders, eye shadows and blushers, mascaras, foundations, creams, lotions and sera and deodorants (page 2, lines 1 to 4). According to page 6, lines 52 to 55, the amount of microspheres in the compositions may vary largely, but in general will be between 0.1 and 60 weight\%, preferably between 4 and 20 weight\% for gels and 0.5 to 40 weight\% for make-up compositions.
2.5 D4 contains twenty examples, examples 1 to 14 concerning the coating and charging of various kinds of porous microspheres, and examples 15 to 20 the application of such microspheres. Example 8 is the only example in which silicon particles are mentioned: to 10 g of Silcron G-640 microspheres, a dispersion of 10 g perfluorinated oil in 20 g glycerine is added, which silica : glycerine ratio (1:2) falls outside the range of 95:5 to 50:50 now being claimed. Example 8 does not mention any application of the microspheres thus prepared.

None of the application examples includes the microspheres obtained in example 8. In fact, none of the cosmetic compositions exemplified in D4 contains silica particles.

Example 15, cited by the respondents, concerns solid compositions. 100 g of the composition of example 15
contains 4 g of poly- $\beta$-alanine microspheres, as obtained according to example 4 of D4. In Example 4, 10 g of perfluorinated oil are mixed and dispersed in 20 g glycerine. That mixture is combined with 10 g of dry cross-linked poly- $\beta$-alanine microspheres. The ratio microspheres to glycerine is therefore 10:20, which is outside the present range. The perfluorinated oil is of the kind to form a coating on the particles (D4, page 4, lines 27 to 32), so that charging and coating of the microspheres is done at the same time.
2.6 From the above it is clear that, in order to arrive from D4 at the solid cosmetic composition now being claimed, the skilled person would have to start from an example describing a solid composition amongst the six application examples, e.g. Example 15, then exchange the poly- $\beta$-alanine for silica microspheres, choose silica microspheres of 3 to $16 \mu \mathrm{~m}$ and finally raise he silica : glycerine ratio from 20:10 to from 95:5 to 50:50.

It is established jurisprudence that a combination of selections out of many possibilities encompassed by or even specifically mentioned in a document does not constitute the clear and unambiguous disclosure required to result in a lack of novelty (Case Law of the Boards of Appeal, 5th ed., I.C.2.2). The board sees no reason to deviate from the established jurisprudence.
2.7 Therefore, the claimed subject-matter is novel.
3. The patent in suit concerns solid cosmetic compositions. It aims at providing a cosmetic composition that can suppress oil shining without affecting a natural finished appearance, and can also provide a moisturizing effect to non-aqueous compositions (page 2, paragraph [0005]).

Solid cosmetic compositions are disclosed in D4 and also in D3, but not in D7 which was mentioned as the proper starting point by the appellants as well as the opposition division.
3.1 D7 discloses galenical matrices, comprising compositions of (a) microcrystalline cellulose, (b) highly dispersed silica, (c) at least one lipophilic component, selected from the group of oils, fats and waxes, and (d) possibly acrylate polymers and or copolymers, as well as possibly one or more cosmetic or pharmaceutical actives (claim 1). Galenic matrices are defined as particles that serve as carrier material in cosmetic or pharmaceutical applications. The matrix can serve as a carrier for active ingredients or as ad- or absorbent for undesired compounds (page 3, lines 40 to 43). The silica is preferred to be one of the trade name "Aerosil" (page 4, lines 6 to 9). In the examples Aerosil R972 and Aerosil R200 are mentioned, which have average particle sizes in the order of 7 to 16 nanometers (D14, page 4), not 3 to 16 micrometers as now claimed. That was not contested by the respondents.

The matrices of D7 can be used in various applications, in particular gels and solutions (page 6, lines 39 to

44; examples). Solid compositions are not mentioned. The matrices should have good release properties for cosmetic and pharmaceutical actives, and also be suitable as an absorbing material for the removal of undesired compounds such as excess exudates from the body (page 3, lines 27 to 31 ).

D3, which the appellants also mentioned as a better starting point than D4, discloses an anhydrous stick shaped cosmetic composition consisting essentially of between about $15 \%$ and about $80 \%$ of at least one cosmetic powder selected from a group of specified compounds one of which is spherical silica; between about 10\% and about 65\% of at least one low viscosity liquid carboxylic acid ester selected form a group of specified compounds; between about $1 \%$ and about $18 \%$ of at least one high viscosity surface oil selected from a group of specified compounds; between about $2 \%$ and about 15\% of at least one plasticizing agent selected from the groups consisting of acetylated lanolin alcohol, cetyl acetate, caprylic/capric triglyceride, oleyl alcohol, lanolin alcohol, octyldodecanol, or mixtures thereof; between about $5 \%$ and about $20 \%$ of a wax selected from a group of specified compounds (claim 1).

The powder is preferably spherical silica in an amount of between about $0.5 \%$ and $20 \%$, in particular $1 \%$ to $10 \%$, by weight based on the total weight of the lipstick composition (column 4, line 63 to column 5, line 2) and has a particle size between 1 and 20, in particular between 3 and $15 \mu \mathrm{~m}$ (column 4, lines 36 to 47). In the only example, mica is used as the powder component of the composition. No glycerine is mentioned.

D3 aims at a lipstick having a high content of cosmetic powder (column 1, lines 40 to 42), in particular spherical silica because it significantly increases the ease of application of the lipstick (column 3, lines 48 to 50).
3.3 The object of D4 is to provide microspheres that render it possible to introduce relatively large amounts of perfluorinated oil, fluorinated silicone and silicone gum into cosmetic compositions without the use of tensioactive compounds and without viscosity limitations (page 2, lines 5 to 24). Examples 15 and 16 describe lipsticks, i.e. solid compositions, having moisturizing properties. A further application in further solid compositions, e.g. make-up, is also exemplified (example 20).
3.4 The closest document for assessing inventive step is normally a prior art document disclosing subject-matter conceived for the same purpose or aiming at the same objective as the claimed invention and having the most relevant technical features in common, i.e. requiring the minimum of structural modifications (Case Law, supra, I.D.3.1.)

From the above it can be seen that although D7 mentions the release of cosmetic and pharmaceutical actives and the absorption of excess skin exudates by the claimed galenic matrices, it refers to the use in gels, ointments, creams, emulsions, suspensions and solutions, which cannot be called solid compositions, of silica emulsions containing particles in the order of magnitude of nanometres. Therefore, the skilled person
would not turn to D7 in order to find information about solid cosmetic compositions. D4 and D3 do concern solid cosmetic compositions containing (silica) microspheres, D4 being the document disclosing solid cosmetic compositions with moisturizing properties and having the most relevant technical features in common with the claimed compositions.

Therefore, the Board considers D4 as the closest prior art document.

Problem and solution
4. As pointed out above, the problem that the patent in suit seeks to solve is to provide cosmetic compositions that can suppress oil shining without affecting a natural finished appearance, and that can also provide a moisturizing effect to non-aqueous compositions (page 2, paragraph [0005]).
4.1 From the examples it can be seen that compositions containing both silicone-treated spherical silica and spherical acrylate polymer have a higher oil absorbency than compositions without those compounds and that the presence of glycerine on the spherical silica does not influence the absorbency (compare example 1 with example 2 in Table 1, page 6).

However, none of the compositions described for comparative purposes in the examples of the patent in suit corresponds to a composition according to D4. Therefore, no conclusions can be drawn regarding any effect that could be attributed to the selection within D4 of a solid composition, silica microspheres instead
of poly- $\beta$-alanine particles, the silica microspheres having a particle size of 3 to $16 \mu \mathrm{~m}$, and a silica:glycerine ratio of $95: 5$ to $50: 50$.

An improvement over the prior art relied upon by the patent proprietor that is not substantiated by evidence, cannot be taken into consideration in determining the problem underlying the invention and therefore in assessing inventive step (Case Law, supra, I.D.4.2).

In the present case, the Appellant has not shown that the combination of features now being claimed, which are all within the teaching of the closest prior art (see point 3 above), D4, results in any improvement over it.

For these reasons, the problem that the patent in suit seeks to solve can only be to provide further solid cosmetic compositions (Case Law, supra, I.D.4.4/5). In view of the examples, it can be accepted that the above-defined problem is effectively solved by the subject-matter now being claimed.
5. It remains to be decided if the claimed solution was obvious in the light of the documents on file.

As analysed above (point 3), the combination of features now being claimed is a combination of selections made within the disclosure of D4. The skilled person, having at his disposition all the options mentioned in and encompassed by D4 and aiming at providing further solid cosmetic compositions, would therefore have considered all the possibilities included by D4. To combine a number of those options in
order only to provide further solid cosmetic compositions amounts to a random choice within the possibilities of D4 that cannot render such combination inventive. Therefore, claim 1 of the main and only request does not fulfil the requirements of Article 56 EPC.

## Order

## For these reasons it is decided that:

The appeal is dismissed.

Registrar
Chairman
K. Götz
S. Perryman

