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D E C I S I O N
of 20 July 2005

Case Number: T 0269/02 - 3.3.02

Application Number: 92906777.5

Publication Number: 0585239

IPC: A61K 7/42

Language of the proceedings: EN

Title of invention:
Visibly transparent UV sunblock agents and methods of making same

Patentee:
SUN SMART, INC.

Opponent:
IMPERIAL CHEMICAL INDUSTRIES PLC, THE MANAGER,
Symrise GmbH & Co. KG
Elementis UK Limited
Sakai Chemical Industry Co Ltd
Sachtleben Chemie GmbH
Kazumi Imamura

Headword:
Sunblock agents/SUN SMART, INC.

Relevant legal provisions:
EPC Art. 69, 84, 100(c), 123, 111
EPC R. 64

Keyword:
"Late-filed request: admissibility (yes)"
"Amended claims: compliance with Articles 84 and 123 EPC (yes)"
"Remittal to first instance"
"Request for apportionment of costs (refused)"

Decisions cited:
T 0301/87

Catchword:-

Europäisches Patentamt | European Patent Office | Office européen des brevets

Beschwerdekammern | Boards of Appeal | Chambres de recours

Case Number: T 0269/02 - 3.3.02

D E C I S I O N
of the Technical Board of Appeal 3.3.02
of 20 July 2005

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Decision under appeal: **Decision of the Opposition Division of the European Patent Office posted 9 January 2002 revoking European patent No. 0585239 pursuant to Article 102(1) EPC.**

Composition of the Board:

Chairman: U. Oswald
Members: G. Rampold
P. Mühlens
M. Ortega Plaza
J. Willems

Summary of Facts and Submissions

I. This appeal is against a decision of the opposition division posted on 9 January 2002 to revoke European patent No. 0 585 239 ("the patent") entitled "Visible transparent UV sunblock agents and methods of making same". The patent was granted to the appellant with effect from 23 September 1998 in response to European patent application No. 92 906 777.5, filed on 4 February 1992 and claiming two US priorities of 5 February 1991 (Serial No. 65 16 96) and 22 June 1991 (Serial No. 704250).

II. The sole ground for revocation was that claim 1 as granted contained subject-matter which extended beyond the content of the application as originally filed (Articles 100(c) and 123(2) EPC).

III. The application as filed (International application No. PCT/US92/00860, published under the PCT as WO 92/13517) contained inter alia claims directed to (emphasis added by the board):

"1. A substantially transparent topical sunblock formulation for shielding skin from ultraviolet radiation, said formulation comprising a substantially visibly transparent agent for absorbing ultraviolet radiation which is relatively physiologically inert, said agent dispersed within a **substantially colorless** dermatologically suitable **liquid carrier** in at least an amount sufficient to shield substantially all of said skin over which said formulation is

applied from hazardous effects of ultraviolet radiation.

2. The transparent sunblock formulation of claim 1 wherein said ultraviolet absorbing agent comprises a plurality of visibly transparent particles of zinc oxide.

4. The transparent sunblock formulation of claim 2 wherein said ultraviolet absorbing agent comprises a plurality of substantially pure micronized particles of zinc oxide having an average particle diameter of less than about 0.2 microns.

5. The transparent sunblock formulation of claim 2 wherein said ultraviolet absorbing agent comprises a plurality of substantially pure, substantially optically perfect particles of zinc oxide having an average particle diameter of between about 1—100 microns, wherein said particles have a substantially smooth outer surface and are relatively free of internal fractures and imperfections.

9. The transparent sunblock formulation of claim 1 wherein said ultraviolet absorbing agent comprises a plurality of particles of a visibly transparent uv absorbing glass with an average particle diameter of between about 0.01-100 microns, said particles having a substantially smooth outer surface and being relatively free of internal fractures and imperfections.

12. The transparent sunblock formulation of claim 1 wherein said ultraviolet absorbing agent comprises a plurality of particles having a diameter ranging between about 0.01-100 microns formed from a visibly transparent plastic and at least one UV stabilizer compound.

15. The transparent sunblock formulation of claim 1 wherein said dermatologically suitable liquid carrier is selected from among SD alcohol, lanolin, glyceryl stearate, cocoa butter, sorbitan sesquiolate, propylene glycol, mineral oil, isopropyl myristate, petrolatum, acrylic polymers and mixtures thereof.

16. The transparent sunblock formulation of claim 15 wherein said substantially transparent ultraviolet absorbing agent is dispersed within said liquid carrier in the form of an emulsion."

IV. The patent as granted contained 18 claims. In this decision specific reference will be made to independent claim 1 and dependent claim 2 as granted; these claims read as follows:

"1. A transparent topical sunblock formulation for shielding skin from ultraviolet radiation, comprising a visibly transparent agent for absorbing ultraviolet radiation which agent is physiologically inert, said agent being one of

(a) a plurality of visibly transparent micronized particles of zinc oxide having an average particle diameter of less than 0.2 µm and containing less than 20 ppm lead,

less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury;

(b) a plurality of visibly transparent particles of zinc oxide having an average particle diameter of between 1 - 100 µm and containing less than 20 ppm lead, less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury;

(c) a plurality of visibly transparent UV absorbing crystal glass with a bandgap energy of about 400 nm and an average symmetrical particle diameter of between 0.01 - 100 µm, said particles having a smooth outer surface and being free of internal fractures and imperfections; or

(d) a plurality of visibly transparent plastic spheres having a diameter ranging between 0.01 - 100 µm and having incorporated in said plastic at least one UV stabilizer compound,

said agent being dispersed within a dermatologically compatible carrier in an amount effective to shield skin over which said formulation is applied from hazardous effects of ultraviolet radiation.

2. The topical formulation according to claim 1, wherein said dermatologically compatible carrier is selected from SD alcohol, lanolin, glyceryl stearate, cocoa butter, sorbitan sesquioleate, propylene glycol, mineral oil, isopropyl myristate, petrolatum, acrylic polymers or mixtures thereof.

V. Oppositions to the grant of the patent were independently filed by six parties (opponents I to VI; present respondents I to VI). The opponents requested revocation of the patent in part or in toto, variously invoking the following grounds:

(i) lack of novelty (Articles 100(a) and 54 EPC);

(ii) lack of inventive step (Articles 100(a) and 56 EPC);

(iii) insufficient disclosure (Articles 100(b) and 83 EPC); and also

(iv) added subject-matter (Articles 100(c) and 123(2) EPC).

VI. The essence of the reasoning in the opposition division's decision to revoke the patent was as follows:

[A] In the introductory portion of the decision under appeal it was recalled that in the granting procedure claim 1 was amended, *inter alia*, by deleting the features "substantially colorless" and "liquid", both these features relating to the carrier wherein the visibly transparent agent for absorbing ultraviolet radiation of the claimed sunblock formulation is dispersed (see III above: claims 1 as originally filed *vs.* IV above: claim 1 as granted).

[B] With reference to the disclosure at lines 10-14 on page 7 of the application as filed, the opposition division considered that the original disclosure of the claimed subject-matter did not stipulate that the carrier was necessarily colorless and concluded that deletion of this feature from claim 1 as amended did not contravene Article 123(2) EPC.

[C] As regards deletion of the feature "liquid" in claim 1, the opposition division did not, however, follow the proprietor's (appellant's) argument that this feature was implicitly disclosed in claim 1 as granted, in particular, if claim 1 was interpreted in the light of dependent claim 2 (see IV above). In this respect the opposition division noted that claim 2 included, for example, cacao butter, which was clearly a solid carrier at room temperature. It further noted that the objections under Articles 100(c) and 123(2) EPC were directed to claim 1 as such and that the features of dependent claim 2 accordingly imposed no real limitation or restriction on the nature of the carrier in claim 1. Since claim 1 as granted was entirely silent as to the physical state of the carrier, it had to be construed as including both solid and liquid carriers. The opposition division also did not accept the proprietor's (appellant's) argument that sunblock formulations were mandatorily liquid, as such formulations in the form of lipsticks, gels or creams were clearly feasible.

[D] Finally, the repeated statements in the description to the effect that *"a visibly transparent sunscreen is obtained if substantially pure micronized particles of zinc oxide are dispersed in a dermatologically suitable liquid carrier"* (see eg page 13, lines 21-27) made it, in the judgment of the opposition division, entirely clear that the use of a liquid carrier was essential for obtaining transparency. The conclusion was that the use of a carrier in "liquid" form was an essential technical feature of the claimed invention and its omission resulted in a clear contravention of Article 123(2) EPC.

VII. In its statement setting out the grounds of appeal, the appellant requested that the amended set of claims filed with the notice of appeal dated 7 March 2002 be substituted for those rejected by the opposition division. The amended claims were identical with those before the opposition division, with the sole exception that claim 1 had the term "liquid" reinstated in relation to the carrier present in the claimed transparent sunblock formation. Claim 1 as amended read as follows, with the sole amendment compared to claim 1 as granted highlighted by the board in bold italic letters:

"1. A transparent topical sunblock formulation <..... see claim 1 as granted.....>,

said agent being dispersed within a dermatologically compatible ***liquid*** carrier in an amount effective to shield skin over which said formulation is applied from hazardous effects of ultraviolet radiation."

VIII. In advance of the oral proceedings, scheduled to take place on 20 July 2005, the appellant additionally filed an auxiliary request. Claim 1 of this auxiliary request is the same as that of the main request (see VII above). Dependent claim 2, however, has been amended so as to delete the following compounds from the list of suitable carriers in claim 2 as granted: lanolin, glyceryl stearate, cocoa butter petrolatum and acrylic polymers. Amended claim 2 of this request read as follows:

"2. The topical formulation according to claim 1, wherein said dermatologically compatible carrier is selected from SD alcohol, sorbitan sesquioleate, propylene glycol, mineral oil, isopropyl myristate or mixtures thereof."

IX. The appellant and all respondents I to VI were represented at the oral proceedings. At the beginning of the hearing, the board expressed the preliminary opinion that neither the reinstatement of the term "liquid" into claim 1 nor the omission of the feature colorless gave rise to any objections. It expressed, however, *ex officio* certain reservations under Articles 100(c) and 123(2) EPC as to the support of claim 1 before it in the application as filed, in particular as far as embodiments (b) and (c) of claim 1 were concerned (see IV and VII above). Following several submissions of all parties and further discussion as to the support of claim 1 before the board (see VII above) in the application as filed, the appellant requested a short break for deliberation, which was allowed.

X. After the break, the appellant abandoned the previous requests and filed, as its new main and sole request, an amended set of thirteen claims. Claim 1 of this request reads as follows, with the amendments compared to claim 1 as granted highlighted in bold italics below:

"1. A transparent topical sunblock formulation for shielding skin from ultraviolet radiation, comprising a visibly transparent agent for absorbing ultraviolet radiation which agent is physiologically inert, said agent being one of

(a) a plurality of visibly transparent micronized particles of zinc oxide having an average particle diameter of less than 0.2 µm and containing less than 20 ppm lead, less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury,

(b) a plurality of ***substantially optically perfect***, visibly transparent particles of zinc oxide having an average particle diameter of between 1 - 100 µm and containing less than 20 ppm lead, less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury, ***wherein said particles have a substantially smooth outer surface and are relatively free of internal fractures and imperfections;***

[former embodiment (c) deleted]

or

(c) a plurality of visibly transparent plastic spheres having a diameter ranging between 0.01 - 100 µm and having incorporated in said plastic at least one UV stabilizer compound,

said agent being dispersed within a ***substantially colorless*** dermatologically compatible **liquid** carrier in an amount effective to shield skin over which said formulation is applied from hazardous effects of ultraviolet radiation."

Dependent claims 2 to 7 are identical with those as granted; as a consequence of the deletion of former embodiment (c) in claim 1 of the patent as granted, dependent claims 8 to 12 as granted, relating to specific embodiments of item (c) in claim 1 as granted,

have also been deleted and dependent claims 13 to 18 as granted have accordingly been renumbered claims 8 to 13.

XI. The arguments of the appellant as submitted in writing and during the oral proceedings, so far as relevant to this decision, can be summarised as follows:

[1] As regards the appeal based on the amended claims filed together with the notice of appeal (see VII above), it was recalled by the appellant that the contested decision was made on the sole ground that the patent contained subject-matter which extended beyond the scope of the application as originally filed (Articles 100(c) and 123(2) EPC). More specifically, only the deletion of the term "liquid" in relation to the carrier present in the transparent sunblock formulations of the invention was considered by the opposition division as an inadmissible broadening of the claims. The appellant submitted that the appeal as initially filed was thus a remedial appeal in that it sought to obviate the sole issue which had given rise to the adverse finding in the decision under appeal revoking the patent.

[2] The amended claims on which the appeal was initially based had the term "liquid" reinstated in claim 1 in relation to the carrier present in the claimed transparent sunblock formulations. Consequently, the appellant had had a legitimate expectation that the ground of objection which gave rise to the decision to revoke the patent had been overcome by the clearly allowable reinstatement of the term "liquid" in claim 1 and that thus the appealed

decision would be set aside in its entirety. The appellant also argued that, given the narrow ambit of the decision under appeal, this course of action was appropriate; any further issues, including the newly raised clarity and insufficiency objections raised by the respondents at the appeal stage in respect of the term "liquid" reinstated in the amended claims, should be addressed after the case has been remitted to the opposition division for further consideration.

[3] As regards the appeal based on the further amended set of claims 1 to 13 filed during the oral proceedings before the board (see X above), the appellant submitted that this set of claims had been filed in reply to the objections and reservations under Articles 100(c) and 123(2) EPC which the board and the respondents expressed at the beginning of the hearing about the possible non-compliance of embodiments (b) and (c) in claim 1 and deletion of the feature "liquid" relating to the carrier with the requirements of Article 123(2) EPC. It also submitted that the new and sole request was presented with the clear intention to set aside the concerns expressed by the board and respondents for the first time during the hearing.

[4] The appellant pointed out that it addressed in its newly filed request the board's and the respondents' reservations and observations in a direct manner and without raising subsidiary issues which were not considered at the oral proceedings either before the opposition division or the board and which were not addressed in the decision under appeal. In doing so, the appellant sought (i) to deal with the single issue raised in the decision under appeal, namely that the

deletion of the term "liquid" from claim 1 during the prosecution of the application constituted "added subject-matter" and was thus in breach of Articles 100(c) and 123(2) EPC, and (ii) to additionally take account of the objections and reservations expressed at the hearing before the board.

[5] The appellant submitted that the amended set of claims filed during the oral proceedings before the board was fully supported by the disclosure of the application as filed and satisfied the requirements of Article 123(2) and (3) EPC. As regards the alleged inconsistency between the disclosure at page 9, lines 14-17 (*" which are **essentially** free of internal fractures and/or other physical imperfections, and which have a **relatively** smooth outer surface")* and present claim 1 *("wherein said particles have a **substantially** smooth outer surface and are **relatively** free of internal fractures and imperfections)*, the appellant argued that the expressions "relatively" and "substantially" had, in its opinion, essentially the same meaning in the context they were used. It also argued that the wording of embodiment (b) in present claim 1 was identical with that used in original claim 5 and, accordingly, supported by the application as filed.

[6] The appellant did not agree to the respondents' contention that it was necessary to consider the newly raised clarity and insufficiency objections at the oral proceedings before the board in order to decide whether the amended claims were formally allowable. Thus, the new objections of clarity and insufficiency were, in the appellant's opinion, not only issues of formal

allowability but also substantive objections. Moreover, the arguments now submitted by the respondents in these respects had never been raised before the opposition division, despite the appellant's submission during the examination and opposition proceedings that the claims should be implicitly read as including the term "liquid" which was only at this late stage of the proceedings objected to. Consequently, if the board were to consider the newly raised arguments of the respondents at this stage and decide against the appellant, then it would be deprived of its fundamental right of appeal.

[7] However, if the board was minded to consider the issues of clarity and sufficiency, then it was the appellant's position that present claims 1 to 13 met the requirements of Articles 83 and 84 EPC. In the appellant's opinion, it was clearly explained in the description what was meant by substantially optically perfect particles which have a substantially smooth outer surface and are relatively free of internal fractures an imperfections and detailed methods were given in the description how such particles could be produced. Moreover, those skilled in the art of formulating sunblock compositions would readily understand the meaning of the term "liquid" in claim 1 and would have no problem in selecting a suitable dermatologically compatible liquid carrier. With regard to those compounds listed in claim 2, it would be clear to those skilled persons that where the compounds listed in that claim were not liquids *per se* they must be formulated as liquid dispersions or emulsions. In answer to a question from the board, the appellant explicitly declared that sunblock formulations per se,

independent of their physical state (solid or liquid at ambient conditions), were covered by the present claims. Moreover, in a further answer to a question of the board the appellant agreed that, for example, a colorless lipstick when forming a transparent film on application to the skin fell within the scope of present claim 1.

[8] As regards the request for apportionment of costs and the objection of respondent III to the timing of the submission of the amended claims filed together with the notice of appeal (see VII above), the appellant maintained that, by filing these amendments, it responded fully to the objections under Article 123(2) EPC in the contested decision, on the basis of a reasonably held belief that no further amendment of the claims was necessary in order to comply with this article (see also the remarks in **[1]** and **[2]** above). The appellant asserted that it had no intention either to delay the proceedings or to obtain a procedural tactical advantage by not having filed the amended set of claims having the feature "liquid" reinstated in claim 1 already during oral proceedings before the opposition division. On the contrary, the appellant held that it had filed the amended set of claims at the appeal stage as soon as possible already with the notice of appeal, hoping thereby that it would be possible to avoid the need for oral proceedings and to accelerate the proceedings.

XII. The arguments presented by the respondents in their written submissions and at the hearing before the board, insofar as these are relevant to the present decision, can be summarised as follows:

[9] Some of the respondents pointed out that neither claim 1 nor claim 5 as originally filed referred to the specific ranges of the trace metals contained in the particles of zinc oxide according to embodiment (b) in claim 1 in order to conclude that the combination of the specific ranges of the trace metals with the technical features added to embodiment (b) in amended claim 1 filed during the oral proceedings (see X above) lacked appropriate support in the application as filed and, accordingly, contravened Article 123(2) EPC.

[10] The respondents also noted that the discrepancy between the description and present claim 1 resulting from the fact that the terms "relatively" an "substantially" were interchanged in the description as originally filed and in present claim 1 (see for more details X**[5]** above) could give rise to an objection under Articles 84 and 123(2)EPC. In this respect it was argued that, if the basis for an amendment to a claim were to be found in the description, that amendment should be incorporated verbatim into the claim.

[11] In this context it was also submitted by the respondents that no one could definitely exclude that in the present case the term "relatively" was broader than the term "substantially". If this was the case present claim 1 containing the feature "relatively free of internal fractions and imperfections" would be objectionable under Article 123(3) EPC.

[12] Contrary to the appellant's submissions, the respondents' clarity and insufficiency objections were clearly appropriate to these appeal proceedings and

indeed needed to be considered, since the appellant was proposing a claim which introduced certain features not present in any of the granted claims. It was thus necessary to decide whether the claims as a whole were formally allowable. Included within this assessment was the question of whether the claims as amended were clear.

[13] The amendment made by the appellant to include the term "liquid" in claim 1 rendered this claim unclear and thus was a contravention of Article 84 EPC. In particular, there was no definition of the term "liquid" anywhere in the patent, nor was there any indication of the condition under which the desired carrier should be considered to be "liquid" or not. It was however well known that the physical state of a substance, whether solid, liquid or gas, depended upon the conditions to which the substance was subjected, one such condition being temperature. However, as the patent failed to specify such conditions, or indeed any other parameter by which the substance could be judged to be a "liquid" , the term "liquid" was patently unclear.

[14] The situation was worsened by the fact that a number of the carriers listed in claim 2 were not "liquid" at "room temperature", whatever that might be. For instance, lanolin had a melting point of about 40°C and glyceryl stearate (glyceryl monostearate) of 56-58°C and both were therefore in solid form at room temperature. Petrolatum was available in various forms, typically as a waxy solid having a melting point of 45-48°C. Claim 2 also included acrylic polymers, but failed to define the molecular weight of these

polymers. High molecular weight acrylic polymers might well be solid at "room temperature".

[15] In view of the fact that the patent failed to define what is meant by the term "liquid", and failed to include any working examples, it was also unable under Article 83 EPC to provide adequate instructions to the skilled person as to how to formulate a composition as defined in claim 1.

[16] In addition, the specific materials listed in claim 2 might generally also be used in sunblock formulations, many of them were not suitable for use as a carrier for the visibly transparent agent and were used for completely different purposes. For example, glyceryl stearate and sorbitan sesquioleate were emulsifiers, cacao butter and petrolatum were emollients and acrylic polymers were thickeners. It was inconceivable that all of the aforementioned materials could be used as a liquid carrier, for example, for zinc oxide in sunblock formulations. It was impossible for the skilled person to tell whether or not the use of the aforementioned materials in a transparent sunblock formulation fell within the present claims. The present specification taught that in order to obtain transparency it was essential that the carrier was in liquid state. But to what temperature that liquid state actually related, it was impossible to tell from the disclosure of the invention in the patent specification.

[17] The respondents also mentioned that the appellant had argued in the proceedings before the opposition division that the claims only covered liquid sunblock

formulations, i.e. that in order to obtain transparency a liquid carrier must be employed and that the final formulation must also be liquid. However, the present claims were not limited to liquid sunblock formulations. It was possible to employ a liquid carrier and still end up with a non-liquid sunblock formulation, for example by the use of additional thickeners. A lipstick for example could be solid and still have been formed from one or more liquid ingredients.

[18] As regards the request for apportionment of costs, respondent III submitted that, in relation to the timing of the appellant's amended claim filed together with the notice of appeal, it should be noted that the objection raised under Article 123(2) EPC was raised by it in its initial opposition statement. Accordingly, the appellant was given sufficient opportunity during the protracted written proceedings and at the oral proceedings before the opposition division to amend its claims to alleviate the problem under Article 123(2) EPC. However, the appellant chose not to do this, with the result that the patent was revoked on the ground of Article 123(2) EPC, rendering necessary the present appeal proceedings which will deal solely with the issue of amendment. Therefore the appellant's conduct had been far from exemplary, with the result that it has to be questioned whether it should be allowed to amend its claims at this stage in the proceedings. Thus, if the appeal were to be allowed, and the case remitted to the opposition division, the appellant should be made to bear the costs incurred as a result of the present appeal proceedings.

XIII. The appellant requested that the decision under appeal be set aside and that the patent be maintained on the basis of the set of claims filed in the oral proceedings, and that the case be remitted to the first instance for further prosecution.

The respondents requested that the appeal be dismissed.

Respondent III also requested an apportionment of costs.

The appellant requested that the request for an apportionment of costs be refused.

Reasons for the decision

1. The appeal complies with Articles 106 to 108 and Rule 64 EPC and is, therefore, admissible.

2. *Admissibility of the late-filed request*

2.1 As is apparent from paragraph X above, the sole request presently on file was only presented by the appellant at a very late stage of the proceedings, namely during the hearing before the board. Its admissibility into the proceedings is thus a matter for the board's discretion. It is well-established by the jurisprudence of the boards of appeal that, in considering the admissibility of late-filed requests into the proceedings, account is to be taken, *inter alia*, of whether they could have been filed earlier and, if so, why they were not, and of their relevance and in particular whether or not such requests were filed in

reaction to any new submissions, objections or arguments brought up by a party or the board for the first time during the pending proceedings (see, generally, "Case Law of the Boards of Appeal of the European Patent Office", 4th edition, 2001, pages 324 to 333). In addition to these general principles, the board must also ensure that late filing does not take another party by surprise and that, if a late request is to be admitted, the other party or parties have sufficient time to consider it and, as appropriate, reply with a new request of their own.

2.2 In the circumstances of the present case, the board considers that the current request should be admitted into the proceedings, in spite of its late filing.

2.3 The appellant's assertion that this request formed a response to certain objections raised by the respondents and, in particular, to some additional objections and reservations expressed by the board for the first time during the hearing concerning the non-compliance of claim 1 with Article 123(2) EPC (see IX and X above) appears *prima facie* correct. In the circumstances of this case the differences between claim 1 as granted and claim 1 as per the newly filed request were immediately clear to the skilled reader and neither the respondents nor the board had any difficulty understanding the meaning and scope of the proposed amendments. Also bearing in mind the facts that neither the opposition division in the decision under appeal nor the respondents in their written submissions raised objections under Article 123(2) EPC, equivalent to those raised for the first time at the hearing and, in particular, that the respondents did

not object to the admissibility of this late-filed request, the board exercises its discretion in favour of the appellant.

3. *Claim 1 (see X above)- Basis in the application as filed (Article 123(2)EPC; protection conferred (Article 123(3) EPC; clarity and support in the description (Article 84 EPC)*

As a preliminary remark it is to be noted that in the absence of any specific indication, such as eg "as granted" or "present claim", **all references below to support for the present version of claim 1 in the application as filed are to the international application as published under the PCT (WO 92/13517).**

4. **The introductory portion of present claim 1** reads as follows**:** *"A transparent topical sunblock formulation for shielding skin from ultraviolet radiation, comprising a visibly transparent agent for absorbing ultraviolet radiation which agent is physiologically inert, said agent being one of ....."*. (see X above).

4.1 This introductory portion is based on lines 1 to 5 of claim 1 as originally filed and is identical in wording to the introductory portion of claim 1 as granted. No objections under Article 84 or Article 123 EPC can, therefore, be raised.

5. **Embodiment (a)** of the visibly transparent agent for absorbing ultraviolet radiation in present claim 1 reads as follows**:** ....*"a plurality of visibly transparent micronized particles of zinc oxide having an average particle diameter of less than 0.2 µm and*

containing less than 20 ppm lead, less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury"... .

5.1 **Embodiment (a)** results from a combination of claims 1, 2 and 4 (see III above). Moreover, the features "containing less than 20 ppm lead, less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury" are disclosed at lines 9-19 on page 14 (*"In contrast, the **"substantially pure"** zinc oxide particles developed by applicants for use in the present invention, whether **in the form of micronized particles** or larger, "optically perfect" particles as described above, contain no more than the following ranges of trace metals listed below: Table I, lead < 20 ppm, arsenic < 3 ppm, cadmium < 15 ppm, mercury < 1 ppm"*). The above-mentioned features ("containing less ....."") have been substituted in present claim 1 for the more general feature **"substantially pure"** already present in claim 4 (see III above).

The requirements of Article 123(2) EPC are accordingly met.

5.2 **Embodiment (a)** is worded identically in present claim 1 and in claim 1 as granted. No objection under Article 84 or 123(3) EPC can, therefore, be raised.

6. **Embodiment (b)** of the visibly transparent agent for absorbing ultraviolet radiation in present claim 1 reads as follows**:** *"a plurality of **substantially optically perfect**, visibly transparent particles of zinc oxide having an average particle diameter of between 1 - 100 µm and containing less than 20 ppm lead,*

less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury, ***wherein said particles have a substantially smooth outer surface and are relatively free of internal fractures and imperfections".***

6.1 The objection under Article 123(2) EPC raised by the board in its introductory remarks at the oral proceedings, namely that the scope of **embodiment (b)** in claim 1 as granted (see IV above) was unduly broadened during prosecution of the application by omission of certain essential features of the invention as originally disclosed in claim 5 (see III above) and the description (see essentially page 9, lines 10-17), reflects a corresponding objection raised by respondent VI (opponent VI) under Articles 100(c) and 123(2) EPC in its notice of opposition. The board concurs with the respondent's (opponent's) submission in its notice of opposition that the disclosure of embodiment (b) in the application as filed stipulates from a technical point of view (see the whole disclosure; especially page 9, first full paragraph and claim 5) not only that the "visibly transparent particles of zinc oxide" forming item (b) of claim 1 have an average particle diameter of between 1-100 µm" but also that such particles exhibit certain additional properties (see claim 5: *"substantially optically perfect particles of zinc oxide"; "wherein said particles have a substantially smooth outer surface and are relatively free of internal fractures and imperfections"*).

6.2 **Embodiment (b)** in present claim 1 results from a combination of claims 1, 2 and 5 (see III above). As already mentioned above in the context of embodiment (a), the features "containing less than 20 ppm lead,

less than 3 ppm arsenic, less than 15 ppm cadmium, and less than 1 ppm mercury" are disclosed in Table I on page 14 of the application as filed and have been substituted for the more general feature "**substantially pure** particles of zinc oxide" already present in claim 5 as originally filed which is dependent on claim 1.

6.3 The board cannot therefore share the objection of respondent IV at the hearing, namely that the combination of the above-mentioned claims 1, 2 and 5 does not provide adequate support for embodiment (b) in present claim 1 because claims 1 and 5 did not specifically refer to the ranges of trace metals. This feature was of course already present in dependent claim 5 by the more general reference to "**substantially pure particles** of zinc oxide" (see III above) and has been defined more precisely in present claim 1 by insertion of the ranges of trace metals in accordance with the disclosure in the original description (see page 14, lines 9-19: "..... *the **"substantially pure"** zinc oxide particles developed by applicants for use in the present invention, whether **in the form of** micronized particles **or larger,"optically perfect" particles as described above**, contain no more than the following ranges of trace metals .....*").

Embodiment (b) is also fully supported by claim 5 (see III above) as far as the use of the terms "relatively" and "substantially" is concerned (see for more details X**[5]** and XI**[6]** above).

6.4 In view of the above, the board reached the conclusion that **embodiment (b)** as claimed in present claim 1 is

adequately supported by the originally filed documents and that the requirements of Article 123(2) EPC are accordingly met.

6.5 The board is also unable to share the objection of respondent VI at the hearing, namely that embodiment (b) in claim 1 as amended contravenes Article 123(3) EPC, because the wording in present claim 1 is not fully identical with the wording of the corresponding disclosure at lines 14-17 on page 9 of the application as filed.

The substantive provision set out in **Article 123(3) EPC** (prohibition of extension of protection) is specifically limited in its application to the amendment of claims in opposition proceedings before the EPO. When considering **Article 123(2) EPC**, the question of extension of subject-matter depends upon a comparison with the application as filed. When considering **Article 123(3) EPC**, however, the question of extension of the protection conferred depends upon a comparison with the claims as granted. In comparison with the definition of embodiment (b) in claim 1 as granted (see IV above), embodiment (b) is defined in present claim 1 by certain additional features (see X and 6.2 above). The protection conferred is thus clearly restricted and the requirements of Article 123(3) EPC are accordingly also met.

6.6 For the sake of completeness, the board notes that if the patent is to be maintained, the opposition division has the power and obligation under Article 84 EPC to decide whether or not a discrepancy exists between the amended wording of embodiment (b) in claim 1 and the

corresponding part of the description. Should the opposition division find that this is the case, the description should be adapted to the wording of embodiment (b) in present claim 1.

6.7 Although an objection under **Article 84 EPC** cannot in itself be a ground of opposition under Article 100 EPC, the board accepts that such an objection can be raised during opposition or opposition appeal proceedings if amendments made in those proceedings emphasise a problem of clarity. Article 102(3) EPC does not allow objections to be based upon Article 84 EPC if such objections do not arise out of the amendments made in the course of the opposition or opposition appeal proceedings (see decision T 301/87, OJ EPO 1990, 335, especially Reasons, points 3.7 and 3.8; and see, generally, "Case Law of the Boards of Appeal of the EPO", 4th edition 2001, VII.C.10.2, pages 488 to 489). This means that, at this stage, the board only has the power to examine whether or not amendments made in the course of the opposition or opposition appeal proceedings introduce a contravention of Article 84 EPC with regard to clarity and support.

6.8 In view of what has been said above, in the present case clarity and support in the description under Article 84 EPC have to be examined only in respect of the following highlighted amendments in embodiment (b) made in the course of the present opposition appeal proceedings: *"a plurality of **substantially optically perfect**, visibly transparent particles of zinc oxide having an average particle diameter of between 1 - 100 µm and containing less than 20 ppm lead, less than 3 ppm arsenic, less than 15 ppm cadmium, and less than*

1 ppm mercury, ***wherein said particles have a substantially smooth outer surface and are relatively free of internal fractures and imperfections".***

6.9 In accordance with Article 69 EPC, *"the description and the drawings shall be used to interpret the claims"*. This applies to the present case insofar as the objections of lack of clarity of claim 1 are concerned. In respect of embodiment b) in present claim 1 the description of the application as filed (see especially page 8, line 29, to page 9, line 24) and the patent as granted (see column 5, line 49, to column 6, line 29) contain the following instructions and explanations: *"A second embodiment of the present invention is directed to the formation of physical sunscreen products comprising a particulate zinc oxide sunblock, preferably spherical in shape, having a diameter of an order of magnitude greater than the "standard size" (i.e., greater than about 0.7—0.9μ) particles used in prior art sunscreen compositions described above. The particles used in the subject embodiment are thus also substantially larger than the micronized particles described for use with the previous embodiment, i.e., they measure at least about 1 micron, and preferably between about 1—100 microns in diameter. At diameters above about 100μ, the optical performance of this material appears to deteriorate somewhat.* ***What is required, however, is that these particles be prepared by a process, such as gas phase chemical vapor deposition (CVD), spray pyrolysis or sol—gel particle formation, which results in the formation of symmetrical, substantially "optically perfect" crystals which are essentially free of internal fractures and/or other physical imperfections, and which have a***

relatively smooth outer surface. *Such crystals, as a result of their morphology, have the required optical properties for use with the sunscreen formulations of the present invention, i.e., they absorb a substantial portion of the ultraviolet radiation to which they are exposed, which, as noted above, is greater than that which is absorbed with the use of prior art sunblock products, while remaining transparent in the range of visible wavelengths."*

6.10 In view of the explanations and instructions provided in the description, the board is satisfied that all the technical features of **embodiment (b)** in claim 1 as amended are sufficiently clear and supported by the description within the meaning of Article 84 EPC.

7. **Deletion of embodiment (c) from claim 1 as granted;** this embodiment of the visibly transparent agent for absorbing ultraviolet radiation read as follows in claim 1 as granted: *"a plurality of visibly transparent UV absorbing crystal glass with a bandgap energy of about 400 nm and an average symmetrical particle diameter of between 0.01 - 100 µm, said particles having a smooth outer surface and being free of internal fractures and imperfections".*

7.1 Embodiment (c) has been deleted in response to the board's objections at the hearing, under Article 123(2) EPC, to the feature of embodiment (c) in claim 1 as granted *"..... crystal glass with a bandgap energy of about 400 nm and* ***an average symmetrical particle diameter*** *of ....."* (see IV above). Deletion of the alternative embodiment (c) removes the objections under Article 123(2) EPC made by the board.

7.2 No objection under Article 123(2) and (3) EPC was raised by the respondents to the deletion of embodiment (c). Nor does the board see any reason to raise any objection of its own, This amendment amounts only to the deletion of one of the alternative embodiments for the visibly transparent agent for absorbing ultraviolet radiation lacking adequate support in the originally filed application, and hence neither incorporates additional subject-matter nor involves a broadening of the scope of protection.

8. **Embodiment (d)** in claim 1 as granted, now designated **embodiment (c)** of the visibly transparent agent for absorbing ultraviolet radiation in present claim 1, reads as follows: *"a plurality of visibly transparent plastic spheres having a diameter ranging between 0.01 - 100 µm and having incorporated in said plastic at least one UV stabilizer compound";*

8.1 **Embodiment (c)** in present claim 1 results from a combination of claims 1 and 12 and finds moreover support in the disclosure from line 12 on page 20 to line 1 on page 21.

The requirements of Article 123(2) EPC are accordingly met.

8.2 The wording of embodiment (c) in present claim 1 is identical to that of embodiment (d) in claim 1 as granted. No objection under Article 84 or 123(3) EPC can, therefore, be raised.

9. **The features at the end of claim 1 relating to the dispersion of the agent within the carrier** read as follows: "said agent being dispersed within a **substantially colorless** dermatologically compatible **liquid** carrier in an amount effective to shield skin over which said formulation is applied *from hazardous effects of ultraviolet radiation*".

9.1 All the technical features relating to the carrier in present claim 1, including the reinstated features "substantially colorless" and "liquid" and the effective amount of the agent being dispersed in said carrier, are disclosed, *inter alia*, in claim 1 (see III above).

9.2 The decision under appeal (see especially Reasons, point 2.1) found that the disclosure at lines 10-14 on page 7 provided the basis for omitting the feature "substantially colorless" from claim 1 as granted.

The board concurs with the respondents that no adequate basis can be found in the application as filed as a whole and, in particular, in the passage cited by the opposition division for deleting the feature in question. The respondents' argument is correct that the passage cited by the appellant refers in the context of embodiment (a) to micronized zinc oxide particles measuring **up to 0.2 µm in size,** whereas present claim 1, supported by originally filed claim 4, refers to micronized zinc particles having an average particle diameter of **less than 0.2 µm.** It follows that the opposition division in the decision under appeal was incorrect in contending that the disclosure at lines 10-14 on page 7 provides an adequate basis for the

deletion of the feature "substantially colorless" in the patent as granted because a substantial difference exists between micronized zinc oxide particles measuring **up to 0.2 µm in size** and such particles having an average particle diameter of **less than 0.2 µm**.

9.3 Amended claim 1 in the appellant's request, which has both features "substantially colorless" and "liquid" reinstated in relation to the carrier present in the transparent sunblock formulation, is thus acceptable under Article 123(2) and (3) EPC.

9.4 In the light of the description it is, in the board's opinion, sufficiently clear what is meant in the present case by a substantially colorless, dermatologically compatible liquid carrier. There cannot be, in the board's judgment, any doubt that neither the material used for preparing the carrier, for example in the form of an emulsion, nor the claimed transparent sunblock formulation as such must necessarily be in liquid form but that the carrier or vehicle itself (see page 10, line 29) in which the visibly transparent agent for absorbing ultraviolet radiation according to any of the embodiments (a), (b) or (c) is dispersed must be liquid in the normal sense of that term. This is in agreement with the appellant's submission at the hearing that sunblock formulations *per se*, independent of their physical state (solid or liquid at ambient conditions), are covered by the present claims and is also in agreement with the fact that present claim 1 contains no limitation of the term "liquid" to any specific conditions to which the liquid carrier is subjected, such as, for example, the temperature.

9.5 Therefore, no contradiction can be seen between the features of present claim 1 and dependent claim 2. It would be clear to those skilled in the art, that, where the compounds listed in claim 2 were not liquids *per se*, they must be formulated as liquid carriers or vehicles, for example in the form of dispersions or emulsions.

10. To summarise, the board finds that present claim 1 complies with the requirements of Articles 84 and 123(2) EPC. These conclusions extend not only to claim 1 but also for dependent claims 2 to 13.

11. *Remittal*

The decision under appeal revoked the patent on the sole ground that claim 1 as granted and the identical claim 1 in the auxiliary request before the opposition division did not comply with the requirements of Article 100(c) EPC which is, of course, based on a violation of Article 123(2) EPC. Thus, the first instance did not decide on the further grounds of opposition under Article 100(a) and (b) EPC and expressed no view as to whether the claimed subject-matter fulfilled the requirements of Articles 54, 56 and 83 EPC. Objections under Articles 100(b) and 83 EPC to the patent as granted are a central issue raised by all opponents in their notices of opposition. The issue of sufficiency of disclosure was deliberately left undecided by the opposition division.

Further objections under Article 83 EPC have been raised by the respondents to the subject-matter of the claims in the current amended version. Having studied

the objections under Article 100(b) and 83 EPC raised in the course of the first-instance opposition proceedings, the board finds that there is a close connection between those objections and the further objections under Article 83 EPC, raised by the respondents, to the patent as amended at the appeal stage. Under these circumstances the board considers it appropriate to allow the subject-matter of the claims of the present sole request to be considered by two instances as far as the objections under Article 54 EPC (novelty), Article 56 EPC (inventive step) and Article 83 EPC (sufficiency of disclosure) are concerned. Consequently, the board uses its discretion under Article 111(1) EPC by remitting the case to the opposition division for further prosecution on the basis of the claims in the appellant's present request.

12. *Costs*

12.1 A decision awarding costs under Article 104(1), being an exception to the norm that all parties meet their own costs, only arises if, "for reasons of equity", the special circumstances of the case call for it. The board believes costs should be awarded if a party to proceedings can be held to have caused unnecessary expenses that could well have been avoided with normal care.

12.2 Having weighed up the various facts and arguments presented by the parties, the board has reached the conclusion that, in its opinion, the above-mentioned criteria have not been met in the present case. There is no indication in the file that the appellant had any reason to believe that the deletion of the features

"substantially colorless" and "liquid", which was examined and accepted by the examining division in the grant procedure, would in whole or in part prejudice the maintenance of the European patent in opposition proceedings. Not even in its communication under Rule 71a EPC accompanying the summons to oral proceedings, did the opposition division mention that deletion of the above-mentioned features would possibly be a point which, in its opinion, needed to be discussed for the purposes of the decision to be taken. The appellant's attempt to defend its patent in the opposition proceedings on the basis of its main request that the oppositions be rejected or on the basis of the auxiliary request before the opposition division appears thus reasonable and fully justified.

12.3 In view of the above considerations, it was, contrary to the respondents' assertions, in principle not contrary to due care that the appellant had not already come up with a request having the term "liquid" reinstated in claim 1 during the opposition period. In cases such as the present, where the patent has been revoked in opposition proceedings, the appellant must be given the opportunity to study the decision of the opposition division duly substantiated in writing in order to enable it to decide on the formulation of appropriate requests for the appeal proceedings. In these circumstances, the board does not find that the appellant has abused or exceeded its legitimate rights, thereby arbitrarily causing the respondents to incur costs which, in all fairness, ought to be reimbursed.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside

2. The case is remitted to the first instance for further prosecution.

3. The request for apportionment of costs is refused.

The Registrar: The Chairman:

A. Townend U. Oswald