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Datasheet for the decision of 6 March 2015

Case Number: T 1918/10 - 3.3.03

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Language of the proceedings: EN

Title of invention:
ARTICLE COMPRISING LIGHT ABSORBENT COMPOSITION TO MASK VISUAL HAZE AND RELATED METHODS

Patent Proprietor:
M&G USA Corporation

Opponent:
INVISTA Technologies S.à.r.l.

Headword:

Relevant legal provisions:
EPC Art. 56, 83, 111(1)
RPBA Art. 12(4), 13(3), 13(1)

Keyword:
Sufficiency of disclosure - (yes)
Inventive step -
(yes: claims 25, 39, 49 and their dependent claims)
Late-filed evidence - admitted (in part)
Late-filed argument - admitted (no)
Appeal decision -
remittal to the department of first instance (yes: granted claims 1-24 and 48)

Decisions cited:
T 0608/07, G 0010/91

Catchword:

Europäisches Patentamt
European Patent Office
Office européen des brevets

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Case Number: T 1918/10 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 6 March 2015

Appellant: (Patent Proprietor)	M&G USA Corporation State Route 2 Apple Grove, WV 25502 (US)
Representative:	Hoffmann Eitle Patent- und Rechtsanwälte PartmbB Arabellastraße 30 81925 München (DE)
Appellant: (Opponent)	INVISTA Technologies S.à.r.l. Zweigniederlassung St. Gallen Kreuzackerstrasse 9 9000 St. Gallen (CH)
Representative:	Schweitzer, Klaus Plate Schweitzer Zounek Patentanwälte Rheingaustrasse 196 65203 Wiesbaden (DE)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 10 August 2010 concerning maintenance of the European Patent No. 1590398 in amended form.**

Composition of the Board:

Chairman	M. C. Gordon
Members:	O. Dury
	C. Brandt

Summary of Facts and Submissions

I. The appeals by the opponent and the patent proprietor lie against the decision of the opposition division maintaining in amended form European patent No. EP 1 590 398, based on application No. 04 706 955.4, corresponding to the international application filed as PCT/US2004/002519 and published as WO 2004/069909.

II. The granted patent contained 60 claims, of which claims 1, 17, 25, 39, 48 and 49 read as follows:

1. A transparent article comprising a thermoplastic polymer matrix; a plurality of domains forming a discrete phase within the thermoplastic polymer matrix, each domain encompassing at least one incompatible filler and possibly a void dispersed in the thermoplastic matrix, said domains having a range of dimensions in a plane essentially parallel to the surface of said article, wherein said dimensions of at least some of said domains in said plane of said article fall within a range of from about 380 nm to about 720 nm; and an effective amount of at least one light absorbent composition, wherein said at least one composition absorbs light in a region of the visible spectrum at wavelengths that at least substantially covers said range of dimensions of said domains in said article, to substantially mask any visual haze of said transparent article.

17. A process for the production of a transparent article made of a blend of a major component of polyester, a minor component in the form of a discrete phase of at least one incompatible filler dispersed therein, and at least one light absorbent composition, comprising: blending the filler into the polyester; forming an article into a desired size and shape, wherein domains comprising the filler and possibly a void are created in the polyester upon formation of the article; determining a range of dimensions in a plane essentially parallel to the surface of the article for the domains in the polyester, at least some of the dimensions falling within a range of from about 380 nm to about 720 nm; and finding a light absorbent composition that absorbs light in a region of the visible spectrum at wavelengths that at least substantially covers the range of dimensions of the domains in the polyester; and adding an effective amount of the light absorbent composition to the polyester and the filler and forming a different, transparent article into the same desired size and shape, to substantially mask any visual haze in the article.

25. A transparent article comprising: a thermoplastic polymer matrix; a plurality of domains forming a discrete phase within the thermoplastic polymer matrix, each domain encompassing at least one incompatible filler and possibly a void dispersed in the matrix the domains having a range of dimensions in a plane essentially parallel to the surface of the article, wherein the dimensions of at least some of the domains in said plane of the article fall within a range of from about 400 nm to about 700 nm; and at least one light absorbent composition, wherein the at least one light absorbent composition absorbs light in a region of the visible spectrum such that X is less than 9.6 in an equation

$$X = \Sigma\ (1-Ai)\,x\,(Ni)$$

where Ai is the percent of light absorbed at a wavelength i , where Ni is the number of domains per hundred square microns at wavelength i, and where i ranges from 400 nm to 700 nm, the intensity of the light absorbed being calculated on the basis of the concentration of the light absorbent composition, the thickness of the article and the parameters and coefficients of the law of Beer-Lambert-Bouguer.

39. A process for the production of a transparent article made of a blend of a major component of polyester, a minor component in the form of a discrete phase of at least one incompatible filler dispersed therein, and at least one light absorbent composition, comprising: blending a selected amount of the filler into the polyester; forming an article into a desired size and shape, wherein domains comprising the filler and possibly a void are created in the polyester upon formation of the article; determining a range of dimensions in a plane essentially parallel to the surface of the article for the domains in the polyester, at least some of the dimensions falling within a range of from about 400 nm to about 700 nm; blending a selected amount of light absorbent composition into the polyester so as the light absorbent composition makes part of the polyester matrix, to determine that the light absorbent composition absorbs light in a region of the visible spectrum such that X is less then 9.6 in the equation

$$X = \Sigma\ (1-Ai)x(Ni)$$

where Ai is the percent of light absorbed at a wavelength i and Ni is the number of domains per hundred square microns at wavelength i, and where i ranges from 400 nm to 700 nm, the intensity of the light absorbed being calculated on the basis of the concentration of the light absorbent composition, the thickness of the article and the parameters and coefficients of the law of Beer-Lambert-Bouguer; and adding that selected amount of the light absorbent composition to the polyester and the selected amount of filler and forming a different, transparent container into the same desired size and shape, thereby substantially masking any visual haze in the article.

48. A method for masking visual haze in a transparent article including a major component of polyester and a minor component in the form of a discrete phase of at least one incompatible filler, comprising: altering light absorption of the transparent article at wavelengths that at least substantially correlate with dimensions falling within a range of from about 400 nm to about 700 nm, in a plane essentially parallel to the surface of the article, of domains in the thermoplastic polymer created upon formation of the article and containing the incompatible filler and possibly a void.

49. A transparent article comprising: a thermoplastic polyester matrix; a plurality of domains forming a discrete phase within the thermoplastic polyester matrix, each domain encompassing at least one incompatible filler and possibly a void dispersed in the matrix, the domains having a range of dimensions in a plane essentially parallel to the surface of the article, wherein the dimensions of at least some of the domains in said plane of the article fall within a range of from about 400 nm to about 700 nm; and at least one colorant which is mixed into the matrix, wherein the at least one colorant absorbs light in a region of the visible spectrum such that X is less than 9.6 in an equation

$$X = \Sigma\ (1-Ai)x(Ni)$$

where Ai is the percent of light absorbed at a wavelength i, where Ni is the number of domains per hundred square microns at wavelength i, and where i ranges from 400 nm to 700 nm.

The remaining claims were drafted as dependent claims and are, apart from claims 46 and 47 indicated hereinbelow, not relevant for the present decision.

"46. The process of claim 17, wherein X is less than 9."

"47. The process of claim 25, wherein X is less than 7.5."

III. An opposition to the patent was filed, in which revocation of the patent in its entirety was requested on the grounds of Art. 100(a) EPC (lack of inventive step) and Art. 100(b) EPC.

In the decision under appeal reference was made, *inter alia*, to the following documents:

D1: US 6 083 685
D2: US 2002/0001684
D3: EP-A-0 964 031
D6: Colors are brewing for PET beer bottles, Plastics Engineering, February 2002, page 38
D7: US-A-4 521 556
D8: US-A-4 654 399
D12: WO 2003/029349
D13: WO 2007/042230
D25-D27: Declarations 2-4, respectively, of Mr. G.R. Scantlebury
D30: Update on barrier technology, H. Green, published on 3 June 2009
D31: Declaration of Mr. Scantlebury, dated 5 January 2010

According to that decision, the subject-matter of granted claims 1, 17 and 48 did not satisfy the requirements of Art. 100(b) EPC because the patent in suit did not contain sufficient reliable information to determine whether or not the parameter "visual haze is masked" was satisfied. However, the subject-matter of granted claims 25-47 and 49-60 could be carried out taking into account the information provided in the patent in suit and, if needed, laboratory routine. Those claims were further held inventive since each of D1, D2, D3, D12 and D13 taught away from "domains with size over 300 nm" and because D6 gave "no hint to correlate the domain dimensions of the filler (...)

with the absorbance properties of a colorant in order to impart clarity". Therefore, the patent was maintained on the basis of auxiliary request 1, the claims of which consisted of granted claims 25-47 and 49-60.

IV. Both the opponent and the patent proprietor lodged an appeal against the above decision.

V. In its statement of grounds of appeal the opponent requested that the patent be revoked in its entirety and filed the following documents:

D32-D33: Declarations 7 and 8, respectively, of Mr. G.R. Scantlebury
D34: US 5 258 233
D35: US 2004/0013833
D36: Declaration 9 of Mr. G.R. Scantlebury

Further arguments were submitted with letter of 5 May 2011.

With letter of 11 August 2011 the opponent filed the following documents

D37: ANSERS analysis report, issued on 7 July 2011, order n° Gan00086-15e
D38: email correspondence
D39-D48: documents concerning Perrier bottles

in support of a first public prior use (APPE bottle).

With letter of 16 August 2011 the opponent submitted further arguments and documents, among others,

D49: Declaration 10 Mr. G.R. Scantlebury
D50: Details of D49

Further arguments were submitted with letter of 14 November 2011.

With letter of 30 September 2013 the opponent filed the following document

D52: Domain analysis of Fraunhofer-Institut für Angewandte Polymerforschung IAP, dated 17 September 2013

in support of a second public prior use (ALPLA bottle).

With letters of 7 October 2013 and 30 October 2013 further documents relating to correspondence between the parties in respect of an analysis of the domain sizes of a part of a PET "Perrier bottle" were submitted.

VI. In its statement of grounds of appeal the patent proprietor requested that the patent be maintained as granted.

In its letter dated 9 May 2011, the patent proprietor submitted further arguments and referred to experimental evidence that he had filed with letter of 19 March 2010 (hereinafter designated "D53"). Further submissions were made with letters of 15 September 2011, 12 December 2011, 26 November 2012, 14 October 2013, the following document being filed (with letter of 26 November 2012)

HE-1: Analysis of Dr. Scantlebury's declaration 7: the Monte Carlo simulation, Mr. Savage, 8 November 2012

Together with a letter dated 13 August 2014 the patent proprietor submitted four auxiliary requests, the main request remaining the maintenance of the patent as granted.

VII. With a first communication dated 20 April 2012 and a second communication issued on 9 April 2014 in preparation for oral proceedings to be held on 14 October 2014, the Board set out its preliminary view of the case. It was in particular indicated that during that oral proceedings the Board intended to limit the discussion to the issue of sufficiency of disclosure and, if necessary and already possible, admission to the proceedings of the late-filed documents. It was further indicated that another oral proceedings may have to be organised at a later stage to decide on remaining issues.

VIII. With a letter of 14 August 2014 arguments were submitted in the name of the opponent by Messrs. Coehn and Pettereins of Fish & Richardson P.C..

IX. With letter of 26 August 2014 the opponent's representative filed two sub-authorisations, also dated 26 August 2014, in the name of Mr. Peterreins and Mr. Coehn, to authorise them "to act for (the opponent) in the oral proceedings on October 14, 2014".

X. With two letters both dated 16 September 2014, the opponent's representative announced that

- Mr. Bayer would be present at the oral proceedings as technical expert and
- Mr. Jansen would be available to be heard as a witness for the public availability of the first public prior use.

XI. With letters of 18 September 2014 and 24 September 2014 written arguments were submitted in the name of the opponent by Mr. Coehn.

XII. Further arguments were filed by the patent proprietor with letter of 26 September 2014, in which a further document was cited.

XIII. At the beginning of the oral proceedings held on 14 October 2014 in the presence of both parties, Mr. Peterreins and Mr. Coehn both submitted an authorisation, each of which being dated 7 October 2014 to represent the opponent.

During these oral proceedings, each of granted claims 1, 17, 25, 39, 48 and 49 were held to meet the requirement of Art. 83 EPC.

The first and second alleged prior uses submitted by the opponent were not admitted with regard to the ground of opposition pursuant to Art. 100(a) and 56 EPC. Accordingly none of the documents cited in support of the alleged prior uses (i.e. D37-D48 and D52) was admitted into the proceedings.

It was further decided that:

- the opponent's written submissions of 14 August 2014, 18 September 2014 and 24 September 2014 were deemed not to have been filed;
- D50 was admitted into the proceedings.

Finally, the parties were informed that a further oral proceedings would be convened for discussion of the requirements of Art. 56 EPC.

XIV. With a communication issued on 13 November 2014 accompanying the summons to a second oral proceedings to be held on 6 March 2015, the Board set out its preliminary view of the case in respect of inventive step.

XV. With a letter dated 5 February 2015 the opponent submitted further arguments as well as two documents.

XVI. With a letter dated 6 February 2015 the patent proprietor filed five auxiliary requests replacing all former auxiliary requests.

XVII. The opponent's arguments as relevant for the present decision may be summarised as follows:

Letters of 14 August 2014, 18 September 2014 and 24 September 2014

a) Although the sub-authorisations and authorisations submitted were postdated, Mr. Peterreins and Mr. Coehn, who are both European patent attorneys, had been fully authorised to represent the opponent as early as 14 August 2014, as could be derived from the full authorisations dated 7 October 2014. Therefore, those letters were duly submitted.

Main request

Sufficiency of disclosure - Granted claims 1, 17 and 48

b) The feature "to substantially mask visual haze" was a definition in the form of a "result to be achieved", which was not allowable, in particular because the patent in suit lacked guidance how to

achieve that result. That deficiency was particularly relevant in the present case because the term "visual haze" represented an unusual parameter and as such should be defined unambiguously in the patent in suit. This was not the case since it was purely subjective (as indicated in paragraph [0013] of the patent in suit) and because, also according to the patent in suit, it depended on the thickness of the article (paragraph [0098]), the lighting conditions (paragraphs [0105]-[0107]), the test panel selected ([0094]-[0096]), the determination method chosen (paragraph [0013]), none of which was either defined in the granted claims or unambiguously disclosed in the patent in suit;

According to paragraph [0013] of the patent in suit, "visual haze" could not be measured, contrary to the patent proprietor's argumentation. Although reflectance measurements may have been made by the patent proprietor in the course of the proceedings, the patent in suit failed to disclose that reflectance could be used to determine visual haze.

c) The patent in suit showed that the degree of masking depended not only on the amount of light absorbent used (see e.g. Tables I-II) but also on the nature thereof (paragraph [0094], Table I). Since it was not possible to determine when visual haze was substantially masked or not, the skilled person was not in a position to determine the amount of light absorbent to be used and, therefore, not able to carry out the invention. The patent in suit further failed to provide any guidance as to which colorant should be used in

which amount in order to achieve the effect of masking visual haze.

d) According to granted claim 1, the selection of the light absorbent primarily depended on the result of the determination of the domain sizes. However, the patent in suit did not provide enough guidance in that respect for the following reasons:

i) the cutting plane affected the determination and the patent in suit provided no definition in that respect. It was not clear what a plane parallel to the surface of an article such as a bottle was and different planes could be contemplated, different from that identified by the patent proprietor during the first oral proceedings before the Board, e.g. any plane cutting the article which was perpendicular to the line of sight;

ii) according to paragraph [0079] of the patent in suit, only one SEM picture needed to be taken. The explanations provided by the patent proprietor during the first oral proceedings before the Board were not provided in the patent in suit and could not be considered for assessing sufficiency;

iii) D32, D33 and D50 showed that the domains' distribution depended on where the cut was made. However, the patent in suit provided no guidance where to make the cut;

iv) the term "range of dimension" was unclear and different dimensions could be contemplated (major axis; perpendicular to the major axis; any other diameter of a domain);

v) if additives other than the incompatible filler were additionally present, one could not distinguish domains that effectively contained an incompatible filler from those that contained an additive but no incompatible filler;

vi) no guidance was given how to proceed for articles prepared using materials other than polyester as matrix and polyamide as incompatible filler, in particular for systems comprising components of similar chemical nature and/or for fillers such as clay. Also, no method was provided when fillers were present in high amounts, such as up to 50 %;

vii) the choice of etching conditions and cutting techniques employed would influence the result;

viii) it was not indicated how the Lucia software specified e.g. in paragraph [0072] worked, in particular how it determined the domain size.

e) For these reasons the requirements of Art. 83 EPC were not met for any of granted claims 1, 17 and 48.

Sufficiency of disclosure - Granted claims 25, 39 and 49

f) In order to determine factor X, the number of domains had to be known. However, the determination of those domains depended on the location, e.g. whereabouts on the article the sample was taken and the depth of the sample within the wall of the article, as shown by the

simulations reported in D32-D33 and in the experimental data D50. The intention to submit the latter had been announced in the statement of grounds of appeal but due to time constraints it could only be filed afterwards. Under these circumstances, a given article could not be associated unambiguously with one single X factor but, depending on the method of determination employed with a multiplicity of X factors, which amounted to both a lack of sufficiency and clarity.

g) The number of domains analysed in D50 was at least similar to the disclosure in that respect given in paragraph [0113] of the patent in suit (166 domains) or derivable from Figs. 10-12 (as few as 13 domains).

h) Different information was provided in the patent in suit regarding whether Ai was to be determined with or without filler (paragraphs [0032] and [0112]-[0113], Figs. 11-12). Besides, according to paragraph [0060], the catalyst could contribute to colouring and, thus, have an impact on Ai.

i) Factor X as specified in granted claim 25 failed to take into account the article thickness, which had an impact since visual haze was related to observing in the longest direction in the plane of interest.

j) Therefore, claim 25 did not meet the requirements of Art. 83 EPC.

k) The same arguments were valid regarding granted claims 39 and 49.

First public prior use (APPE bottle)

l) The opponent had been approached during the current appeal proceedings by company APPE, which provided the bottle submitted as public prior use after determination of the domain sizes by an independent laboratory. It would not have been possible to submit this earlier.

The bottle was prepared from a preform made by APPE (formerly Schmalbach-Lubeca) and sent to Perrier to make a bottle and fill it. The bottle was then returned to APPE, which archived it until providing it to the opponent.

m) The evidence provided showed that the bottle was made of a polymer matrix, contained a plurality of domains and a colorant and was such that factor X was less than 9.6.

The public prior use occurred before 31 May 2002 as derivable from the date at its neck portion, which was shown to be the "limit date for use". It could be assumed that such bottles had been offered for sale, as further confirmed by the advertisements made by Perrier around 2001.

At least one bottle had been retained by APPE, which was exhibited in a show case at the reception hall of APPE and freely accessible. The bottle had been provided by Perrier without any restriction or confidentiality obligation.

n) The new evidence submitted did not complicate the case and, since it was so relevant, would even

simplify the proceedings. Its introduction into the proceedings would not be contrary to procedural economy.

o) The public prior use was *prima facie* highly relevant and should be admitted as closest prior art.

Hearing of a witness

p) Mr. Cor Jansen had been announced in writing as witness for the public availability of the first public prior use. He had indeed been present at the beginning of the oral proceedings of 14 October 2014. However, considering in particular the lengthy discussion regarding sufficiency, the board was informed during the oral proceedings of 14 October 2014 that the witness had left Munich and was no longer available.

Second public prior use (ALPLA bottle)

q) The opponent had also been approached during the current appeal proceedings by company Alpla Werke Alwin Lehner GmbH (hereinafter ALPLA), which provided the bottle submitted as second public prior use after determination of the domain sizes by a different laboratory. It would not have been possible to submit it earlier.

r) ALPLA manufactured among other items bottle preforms, including preforms for high barrier PET bottles using a blend of polyester and polyamide. In 2002, ALPLA had received one filled Perrier bottle and retained it in its archives until it

was provided to the opponent.

s) The evidence reported in D52 showed that the bottle was made of a polymer matrix, contained a plurality of domains and a colorant and was such that factor X was less than 9.6.

The public prior use occurred before 21 May 2002 as was derivable from the date at the neck portion, which was shown to be the "limit date for use". It could be assumed that such bottles had been offered for sale, as further confirmed by the advertisements made by Perrier around 2001.

The bottle was obtained by ALPLA without any restriction and was, thus, freely accessible to the public.

t) It was agreed by the opponent during the oral proceedings of 14 October 2014 that the domain size determination could not be revealed by mere visual inspection.

u) The new evidence submitted did not complicate the case and, since it was so relevant, would even simplify the proceedings. Its introduction into the proceedings would support procedural economy.

v) The public prior use was *prima facie* highly relevant and should be admitted as closest prior art.

Inventive step - Granted claim 25

w) The closest prior art was D1, which belonged to the same technical field and disclosed similar

polymer compositions for making containers and having good oxygen barrier properties.

The condensation copolymers disclosed in D1 had a polyester backbone and olefin oligomer segments. Those segments formed a discrete phase in a thermoplastic polymer matrix and represented "domains" in the sense of the patent in suit.
It was further shown in D50 that the determination of the parameter X depended on the location where the measurement was done. In the absence of any indication in the patent in suit regarding the location at which factor X had been determined, X was not a limiting feature of granted claim 25.
It was derivable from the information provided in D1 that the articles prepared in each of examples 18 and 19 of D1, which were made without using a colorant, exhibited less than 9.6 segments/domains with dimensions from 400-700 nm per hundred μm^2, corresponding to the term $\Sigma(Ni)$ of the X factor. As the factor X factor was already met by the articles prepared in examples 18-19 of D1 the addition of any colorant in those articles would mandatorily lead to an X factor of less than 9.6, and that independently whether or not the colorant was so as to match the domain size distribution of the article.

The necessary calculation to arrive at the above conclusion could be carried out on the basis of the histogram of Fig. 5 of D1, taking into account the different densities of the matrix and of the oligomer segment (which was not done in the submission of February 2015 but was corrected during the oral proceedings before the Board) and applying, as indicated for the first time during

the second oral proceedings before the Board, a well-known principle to derive the relationship between the volume of the matrix and the oligomer segments and their respective surface area in a plane of cut. In contrast the determination of the term Σ(Ni) could not be extrapolated from the micrograph of Fig. 2 of D1 for the reason that these only represented a snapshot at a single one location and for this reason had no statistical value.

Therefore, the subject-matter of granted claim 25 only differed from the articles of examples 18 and 19 of D1 in that a colorant was present.
Due to the wording of granted claim 25, the problem to be solved could not reside in the reduction of haze but could at most be seen as maintaining a high transparency of an article by avoiding haze.

Furthermore, the article defined in granted claim 25 could be made of different parts, not all of which needed to be transparent, i.e. some could even be opaque. Granted claim 25 further did not require that the whole article should be made of the composition defined therein but only that at least one part thereof should be so composed. As a consequence, no problem was solved on the whole scope of the claim.

There was no evidence on file that the problem relied upon by the patent proprietor was solved at all. In that respect, Tables 1 and III of the patent in suit showed that the problem was not solved over the whole scope of the claims. In addition, the problem would also not be solved for

articles for which the term Σ(Ni) was less than 9.6 in the absence of a colorant. Nor would any problem be solved in the case that the polymeric matrix and the filler had similar refractive indices. It was also not plausible that the problem was solved for any thermoplastic matrix, filler and light absorbent compositions encompassed by granted claim 25.

There was no indication in the patent in suit of the criticality of the X factor value of 9.6 and it was further shown in D50 that factor X had no technical significance. Therefore, factor X was purely arbitrary and could not be part of the solution to the problem posed.

That the problem was not solved was also shown by the test carried out in D25.

Should the oligomer segments of D1 not be considered as domains in the sense of granted claim 25, which was contested, the solution proposed in the patent in suit was analogous to that of D1, namely to minimise the number of domains having a size in the visible range and containing a component that was immiscible with the polymer matrix and, thus, caused haze.

Under these circumstances, it was obvious to solve the above problem by using in any of examples 18-19 of D1 any known colorant, as taught either in the description of D1 or in each of D6 to D8.

x) The objection submitted in writing and starting from D35 as closest prior art was withdrawn during

the second oral proceedings before the Board.

y) During the oral proceedings before the Board, objections of lack of an inventive step starting from the comparative example disclosed in examples 27-30 of D1 and starting from D3 as closest prior art were submitted for the first time.

Inventive step - Granted claim 39 and 49

z) The same arguments as for granted claim 25 were valid.

Inventive step - Granted claims 1, 17 and 48

aa) In their submission dated 5 February 2015, the opponent held that a remittal would be appropriate. However, during the second oral proceedings before the Board, the opponent argued that following the reading of the claims made by the Board and further considering that the wording of granted claims 1, 17 and 48 was fundamentally different from that of granted claims 25, 39 and 49, in particular because of the absence of the X factor, different prior art and objections could have to be considered for the assessment of inventive step e.g. D3, D34 and D35. In addition, no decision had been taken by the first instance in respect of the inventive step of those claims. Therefore, the case should be remitted to the first instance for further prosecution.

XVIII. The patent proprietor's arguments as relevant for the present decision may be summarised as follows:

Letters dated 14 August 2014, 18 September 2014 and 24 September 2014

a) Neither the law firm Fish & Richardson, nor Mr. Peterreins or Mr. Coehn had been authorised to represent the opponent at any stage before the oral proceedings of 14 October 2014. Therefore, none of the procedural steps taken by Fish & Richardson, Mr. Peterreins or Mr. Coehn, in particular each of the letters dated 14 August 2014, 18 September 2014 and 24 September 2014 should be considered as having taken place.

Main request

Sufficiency of disclosure - Granted claims 1, 17 and 48

b) Considering that the patent in suit dealt with a ground-breaking invention, it deserved a broad protection. The opposition division focused on the meaning of the expression "to substantially mask any visual haze". However, that characteristic was not a further limitation of the claims but only the result of bringing together the polymer, the filler and the colorant, each of which were defined in the claims. The meaning of "substantially masked" was indicated in the patent in suit (page 3, lines 55-58; page 27, lines 34-36). Consequently, the thickness of the article was implicitly taken into account by adjusting the amounts of e.g. the colorant. Therefore, "substantially masked" was not a result to be

achieved.

The subjective aspect of that characteristic was also addressed in the patent in suit, in particular by using a panel test (paragraph [0094] of the patent in suit), that was to be constituted - in terms of number and types of participants to be representative - depending on the intended use of the article, as was usual in the present technical field (end of paragraph [0027]). Table 1 of the patent in suit illustrated how to carry out the invention in practice.

The patent in suit further indicated an objective method of assessment of said characteristic, namely reflectance to determine the "physical haze"(paragraphs [0013] and [0031]), it being acknowledged that visual haze was not a measured property in the same manner as physical haze.

c) The feature "in an effective amount" indicated that enough light absorbent should be used to achieve the effect of masking visual haze. Granted claim 1 not only defined the constituents to be used but also implicitly their amounts by imposing the requirement that any visual haze was to be masked.

d) The selection of the light absorbent was made depending on the determination of the domain sizes. In that respect, the patent in suit indicated clearly that the measurement was empirical and did not determine the real size of the domains (paragraph [0072]). Practical guidance how to determine the domain sizes was provided in paragraphs [0043] and [0079] of the patent in

suit, illustrating in particular the scanning electron microscopy technique (SEM). In that respect, the article was to be cut in the axial plane of the article as indicated throughout the patent in suit (paragraphs [0019]-[0021], [0027], [0035], [0043]), i.e. in the case of a bottle, through the central axis and perpendicular to the line of sight. The skilled person knew how to perform SEM measurements on bottles in order to arrive at an assessment of the effective domains distribution over the width of an article e.g. to select a sample representative of the article by taking a series of pictures over the whole cross-section of the article in order to achieve statistical convergence.

e) No evidence was provided that it was not possible to determine domain sizes over the whole scope of the granted claims. According to the patent proprietor's technicians, such methods were usual in the art. Clays were not a problem. Also multilayer walls could be analysed in the same manner.

f) Considering that the assessment of sufficiency of disclosure should be made on the basis of the whole patent, the requirements of Art. 83 EPC were met for each of granted claims 1, 17 and 48.

Sufficiency of disclosure - Granted claims 25, 39 and 49

g) Claim 25 itself explained how to determine factor X: cut along the article plane, determine the domain dimensions, list numbers of domains, correlate with wavelength and add up. In that

respect, the opponent himself had demonstrated (e.g. public prior uses; D50) that it was possible to determine the X factor.

h) The patent in suit unambiguously disclosed in paragraph [0032] that Ai was determined without the incompatible filler. The patent in suit further disclosed that the measurement was made without filler but with colorant. As indicated at the beginning of paragraph [0114], the experiment described in paragraph [0113] was used to determine empirically factor X: the inconsistency between paragraphs [0032] and [0113], alleged by the opponent did not exist. The influence of the catalyst discussed by the opponent was taken into account in the measurement of Ai because it was a component of the polymer. The thickness of the article was also taken into account in the Ai measurement.

i) D32-D33 were speculations based on mathematical models and failed to achieve convergency as shown in HE-1. They were also based on the theoretical assumption that the stretch ratio used to make a bottle would directly and quantitatively influence the domain sizes, i.e. apply 1:1 to the domains, which was not proven. The cuts of the article made in D50 were also not in the same plane as defined in the patent in suit. D50 was filed more than one year after the opponent's statement of grounds of appeal and was irrelevant because it did not consider enough domains. It should not be admitted to the proceedings.

j) Should the skilled person note a lack of consistency in the measurements, which was

contested, he would know how to address the problem, namely either by taking more SEM images or by varying the location along the article width which was imaged.

k) Therefore, the opponent had failed to show that the determination of factor X could not be carried out.

l) The same arguments were valid regarding granted claims 39 and 49.

First public prior use (APPE bottle)

m) Although the public prior use was submitted as closest prior art, the opponent's objection amounted to a disguised novelty objection and thus constituted an attempt to introduce a fresh ground of opposition into the proceedings. This was not allowable without the consent of the patent proprietor, which was not given.

Therefore, the documents submitted in support of the public prior use objection should not be admitted to the proceedings.

n) According to the case law of the EPO, objections related to public prior use had to be proven "up to the hilt", especially when all the information was only accessible to the opponent. That criterion was not satisfied in the present case because there was no evidence regarding the following issues:
- There was no evidence relating to the exchange of preform/bottle between Perrier and APPE before the priority date of the patent in suit;

- It was not shown that the bottle examined had been made available to the public;
- There was no evidence
  - that the bottle examined corresponded to a bottle that indeed entered the market;
  - of the free availability to the public of the bottle exhibited in the show case. In that respect, it was further not credible that the public could have examined the bottle to determine its properties;
  - whether the Perrier bottle returned had been made with the exact preform provided to Perrier by APPE;
  - that it was possible to determine the domain sizes by simply looking at the bottle. That point was even denied by the opponent.
  - how the bottle had been stored since being put on display;
  - when the bottle was put in the show case.

o) As derivable from the issues identified above, the public prior use objection led to extreme complication of the case and even amounted to presenting a fresh case at a late stage of the proceedings, which was not allowable.

Hearing of a witness

p) Considering the deficiencies identified in relation to the chain of evidence provided in writing, there was no need to hear a witness. There was further no proper justification why the witness proposed had left Munich during the first oral proceedings before the Board.

Second public prior use (ALPLA bottle)

q) The same objections were valid as for the first public prior use. In particular, the following deficiencies were identified regarding the evidence provided in D52:
- There was no evidence that the bottle was obtained in 2002 and under which circumstances it had been obtained;
- There was no evidence that bottles similar to that examined had indeed entered the market before the priority date of the patent in suit.

r) Therefore, the second public prior use was not supported by an uninterrupted chain of evidence and should also be dismissed.

Inventive step - Granted claim 25

s) The closest prior art D1 did not disclose domains comprising a filler in the sense of granted claim 25. The oligomer segments according to D1 were in particular part of the copolymer matrix and not present as a separate dispersed phase. They neither corresponded to the usual definition of a filler, i.e. an additive as also used in D1 itself, nor to the meaning indicated in the patent in suit. In that respect, the staining procedure used in D1 only showed the presence of double bonds but said nothing in respect of the presence of a filler, its size or its distribution as a dispersion.

Fig. 2 of D1 had a surface area of approximately 9.4 μm^2 and showed at least 4 domains with dimensions in the visible range. Therefore, the

article on which said micrograph had been made contained more than 10 domains/100 μm^2 with dimensions in the visible range.

The calculation of the X factor made by the opponent that was derived from Fig. 5 of D1 were presented for the first time in their correct version during the oral proceedings before the Board and could not be verified. Besides, they were based on an assumption regarding the calculation of the domains distribution in the plane of cut from the respective volumes of the matrix and the oligomer segments following a "well known principle" which was unknown to the patent proprietor and had only been mentioned for the first time during the second oral proceedings before the Board. Furthermore, the calculation made differed from the result derived from Fig. 2 of D1. Under these circumstances, it could not be concluded that the articles prepared in examples 18-19 of D1 exhibited a term Σ(Ni) lower than 9.6. Since examples 18 and 19 of D1 failed to disclose domains in the sense of granted claim 25, the subject-matter of that claim differed from D1 in the presence of domains, said domains having dimensions in the range of 400-700 nm, in the fact that factor X was less than 9.6 and in the presence of a light absorbent composition.

The problem to be solved was to provide a transparent article that had no visual haze or for which visual haze was masked.

Table III in combination with paragraph [0119] of the patent in suit as well as D53 showed that the problem was indeed solved. In D30, the opponent

also acknowledged that the invention worked.

The opponent's objection according to which the problem was not solved over the whole breadth of the claim was not supported by any evidence. Tables 1 and III of the patent in suit could not be fairly compared.

The opponent's objection that an article being such that the term Σ(Ni) was lower than 9.6 in the absence of a colorant was purely theoretical and no evidence had been provided that such an article existed. In that respect, the patent proprietor further declared during the second oral proceedings before the Board that "an article according to granted claim 25 for which the same article not comprising the light absorbent composition exhibits an X-factor less than 9.6 is not covered by claim 25 as granted.". In particular the wording of granted claim 25 indicated that the light absorbent composition was "such that" X was less than 9.6, which implicitly indicated that without the light absorbent composition, X was above 9.6.

The relevance of D50 had already been addressed during the first oral proceedings in respect of Art. 83 EPC and it had been shown that too few domains had been used in order to achieve convergence. Besides, the calculation made in D50 could not be correct because it was derivable from the analysed strip shown in Figs. 1B and 2B of D50 that around 100 domains in the visible range would be present per 100 μm^2, which was not in line with the calculation made in D50. Because of that inconsistency, D50 could not be relied upon.

Starting from any of examples 18-19 of D1, there was no motivation in the cited prior art to solve the above problem by adding a filler. On the contrary, D1 indicated explicitly that fillers were undesirable. Not only was there no indication that the filler should have dimensions in the visible range, but D1 explicitly taught to avoid using oligomer segments having such dimensions. Finally, there was no hint to use a combination of a filler and a colorant selected so that it would result in the required factor X.

There was also no hint to factor X either in D1 or in any of the other cited documents.

Finally, D1 explained that in order to avoid the drawback of using inorganic fillers, which were known to affect the transparency, that invention relied on modification of the matrix polymer. Therefore, D1 taught away from the solution provided in the patent in suit.

Under these circumstances the prior art provided no motivation to modify the teaching of D1 according to granted claim 25.

Inventive step - Granted claim 39 and 49

t) The same arguments as for granted claim 25 were valid.

Inventive step - Granted claims 1, 17 and 48

u) Although the wording of those claims did not contain factor X, the assessment of the inventive

step for those claims would have to be carried out in the same way as for granted claims 25, 39 and 49. Should the opponent have contemplated other objections, these should have been presented either earlier in the first instance proceedings or at the latest during the appeal proceedings, which had not been done. There was also no apparent reason why the first instance would decide in a different way for granted claims 1, 17 and 48 as for granted claims 25, 39 and 49, which were held to be inventive. Under these circumstances, a remittal to the first instance would not be justified.

XIX. The opponent requested that the decision under appeal be set aside and that the patent be revoked.

The patent proprietor requested that the decision under appeal be set aside and the patent be maintained as granted (main request) or, alternatively, be maintained in amended form on the basis of any of the auxiliary requests I to V filed with letter dated 6 February 2015.

XX. The Board announced its decision at the end of the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

2. Letters of the opponent dated 14 August 2014, 18 September 2014 and 24 September 2014

2.1 The validity of the opponent's representation was objected to by the patent proprietor, which raised doubts as to the extent of the representatives' entitlement to act. Therefore, the Board is empowered to deal with that issue (Spec. Ed. 3 OJ EPO 2007, L.1, Art. 1(3)).

2.2 The opposition in the name of the opponent was filed by Mr. Schweitzer who is a registered European patent attorney of the law firm Zounek Plate Schweitzer Patentanwaltskanzlei which firm changed its name during the course of te proceedings to Plate Schweitzer Zounek Patentanwälte.
According to the sub-authorisations dated 26 August 2014, Mr. Peterreins and Mr. Coehn, both registered European patent attorney of the law firm Fish & Richardson, were authorised by Mr. Schweitzer to act for the opponent **during the oral proceedings** of 14 October 2014 (Board's emphasis). In that regard, the wording of the sub-authorisation leaves no doubt and can only be understood as being restricted to acting at the oral proceedings.

There is no evidence on file that Mr. Peterreins or Mr. Coehn were authorised to perform any procedural act in the name of the opponent apart from representing them at the oral proceedings before the Board. The authorisations filed during the first oral proceedings before the Board are both post-dated (7 October 2014) and cannot serve to demonstrate that Mr. Peterreins and Mr. Coehn were authorised to represent the opponent before that date.

Therefore, each of the letters dated 14 August 2014, 18 September 2014 and 24 September 2014 filed by Mr. Peterreins and Mr. Coehn are deemed not have been

filed (Rule 152(6) EPC).

Main request (patent as granted)

3. Sufficiency of disclosure

3.1 In order to meet the requirements of Art. 83 EPC, an invention has to be disclosed in a manner sufficiently clear and complete for it to be carried out by the skilled person without undue burden on the basis of the information provided in the patent specification. This means in particular in the present case that the skilled person should be able to prepare an article according to any of granted claims 1, 25 and 49 and/or to carry out a process or a method according to any of granted claims 17, 39 and 48.

Granted claim 1

3.2 The subject-matter of granted claim 1 is directed to a transparent article comprising a thermoplastic polymer matrix and an incompatible filler and further comprising a light absorbent composition. In that respect, it is explicitly stated in paragraphs [0075]-[0076] of the patent in suit that the light absorbent composition may be present in a separate part of the article than the part comprising the thermoplastic matrix and the dispersed filler domains, which is compatible with the wording of granted claim 1.

3.3 Feature "to substantially mask any visual haze"

3.3.1 The opposition division considered that claim 1 was not sufficiently disclosed because the patent in suit did not contain any sufficient reliable information about how to determine whether the parameter "visual haze is

masked" was satisfied. That issue continued to be a matter of dispute between the parties in the appeal proceedings.

3.3.2 According to paragraph [0013], "visual haze" means haze that can be observed optically or visually by a person in ordinary direct or indirect light. Masking of visual haze is necessary to render an article suitable for commercial use. In paragraph [0094] (see also [0108]), said feature is stated to be subjective so that in order to determine if it is met, the test was conducted with "different people" (paragraph [0094]) or "several individuals" (paragraph [0096]) - (designated "panel" or "panel test" by the parties - see above).
Although no exact number of persons is indicated in the patent in suit it is to be understood that the panel of people should not be too small in order to be representative and not depend primarily on the quality of the "eye sight of the beholder" (paragraph [0094]).
It is further considered that the panel selected would be informed of the intended use of the bottle and would inspect the article under consideration of the intended use. In particular, in the absence of any indication to the contrary in the patent specification, it is understood that said examination takes place under "normal", daylight conditions. Therefore, although theoretically visual haze may depend on factors such as the angle of the incident light on the bottle sidewall, on the position of the observer relative to this angle and on the type of lighting (diffuse lighting minimising specular reflections) as shown in D27 (page 5), it is considered that such factors are known to the skilled person and would be taken into account in the test submitted to the panel selected to assess masking of visual haze.
The criterion for passing the test is exemplified in

Tables 1 and II (pages 14-15 of the patent in suit), from which it can be concluded that a "pass" is only obtained if all the individuals agree that no haze is present. In that respect, D25 was relied upon as showing that in a specific case it could not be concluded whether or not "visual haze was substantially masked". Such a situation is also described in the patent in suit (Tables 1 and II: "--: inconclusive"). Therefore, according to the information provided in the patent in suit, it would be concluded that in D25 the haze is not "substantially masked", with the conclusion that said bottle does not fall under the scope of claim 1.

The question regarding the subjective aspect of the parameter is addressed in the patent in suit, namely by using a "panel test" involving several individuals. The uncertainty or ambiguity inherent to such a subjective method is compounded by the absence of any indication of the exact number of individuals to form the panel. This issue is however considered to be related to the delimitation of the subject-matter being claimed i.e. to the question if the skilled person is in a position reliably to determine whether or not he is working within or outside the claims. In the present circumstances of the case, that issue is at most, as explained above, related to clarity (Art. 84 EPC) but it was not shown that it was such as to amount to a lack of sufficient disclosure (Art. 83 EPC).

Based on theoretical considerations, the opponent argued in D27 (section 3) that any colorant has an impact on visual haze and would be usable to mask visual haze e.g. by merely increasing its concentration. That conclusion is not in line with the data provided in the patent in suit (see e.g. paragraph

[0095]) and was, therefore, not followed. Besides, the opponent's objection, should it be valid, would imply that any colorant would be suitable: only its amount would have to be appropriately selected in order to satisfy the requirement of "substantial masking" according to granted claim 1. Therefore, that argument did not convince.

A method for the assessment of the feature "to substantially mask any visual haze" is provided in paragraph [0094] of the patent in suit. The information given in paragraph [0107] concern a test used by the inventors in order to verify assumptions in respect of the “theoretical explanations” of how the patent works. As a consequence, those passages of the patent in suit are related to different aspects of the invention and no discrepancy may be seen between them, contrary to the opponent's opinion. In any case, the content of paragraph [0094] would in any case be seen as more relevant in respect of sufficiency since it is directed to working examples illustrative of the invention.

It may be agreed with the opponent that Fig. 8 of D26 shows that for an article such as a bottle different degrees of visual haze may be simultaneously observed, less haze being present in the middle part of the bottle wall and more on the “curved”/convex part of the wall. However, claim 1 defines that the masking applies to "any haze" i.e. no haze may be present upon visual inspection which excludes bottles such as those of D26. Besides, any ambiguity relating to the extent of masking in relation to the presence of the term "substantially" in the wording of the claim would be an issue of clarity (Art. 84 EPC) rather than sufficiency.

The issue of "reflectance" addressed by the parties is

not relevant since it is not disclosed in the patent in suit, or in the application as filed, which is the yardstick for assessing sufficiency of disclosure. Nor was it shown by the patent proprietor that it belonged to common general knowledge that "masking of visual haze" could be assessed unambiguously based on the determination of reflectance.

Under these circumstances, the patent in suit provides sufficient information in order to determine the feature "to substantially mask any visual haze".

3.4 Selection of the light absorbent - Domain sizes

3.4.1 The gist of the invention resides in the appropriate selection of a light absorbent composition which is used to mask the visual haze created by the presence of so-called domains comprising the incompatible filler dispersed in the polymer matrix. Therefore, in order to carry out the invention, the skilled person has to be in a position appropriately to select a composition that absorbs light in specific ranges of wavelength. To establish whether the requirements of Art. 83 EPC are met, it has to be determined whether or not the patent in suit provides sufficient guidance in order to select said light absorbent composition.

3.4.2 According to the patent in suit, the selection of the light absorbent composition may be made either

(a) without determining the domain sizes: according to the patent in suit, it may be considered that if the article exhibits haze, it must have domains in the range defined in claim 1 (paragraphs [0047] and [0072]; or

(b) by determining the domain sizes within the article and selecting an additive that absorbs light in a

range of wavelengths that "at least substantially covers the range of dimensions of said domains".

Regarding (a): In that respect, the patent in suit provides no guidance at all how an appropriate "light absorbent composition" should be selected merely using visual inspection (the naked eye). Further considering that the patent in suit teaches that a given colour does not automatically behave identically (i.e. all "reds" are not equally (un)suitable: see end of paragraphs [0085] and [0086]), the skilled person could only find a correct colorant by trial-and-error. Similarly, the colorant concentration (see Tables 1 and II and Figs. 11-12 of the patent in suit) and/or the concentration of the domains at certain wavelengths (paragraph [0109]) may also play a role. Therefore, the selection of an appropriate colorant could only be achieved by chance or would necessitate carrying out a research programme to identify the relevant parameters. Proceeding in that manner would amount to an undue burden, which is not allowable.

Regarding (b): the selection of an appropriate colorant here entirely depends on the determination of the "domain dimensions". In that respect, claim 1 indicates that the "dimensions of at least some of said domains (…) fall within a range of" from about 380-720 nm. From the wording of the claim, it is not clear, in the case of non-spherical domains, which "dimension" is meant. In addition, the patent in suit acknowledges that different dimensions can be identified and measured, depending on the definition adopted: major or minor axis (paragraph [0043]); LuciaM software is used (paragraph [0072]), which seems to measure equivalent diameter (see D31: section 20); longest dimension as determined by the LuciaM software (paragraph [0079]).

Although there is no clear teaching in the patent in suit how said domains should be measured, it is considered that the information provided in paragraph [0079] may be given more weight since it is directed to specific examples illustrating the invention: such method is in particular used for the examples corresponding to Figs. 5-9, which are all "working examples". Besides, although it is plausible that using different definitions for the diameter to be measured would provide different histograms for the domain sizes, there is no evidence on file that the skilled person would on the basis of said information not be in a position to select a light absorbent composition that suitably masks the haze. None of the arguments of the opponent in that respect are supported by the evidence provided. Therefore, although said parameter may be ambiguously defined (Art. 84 EPC), it has not been demonstrated that said ambiguity is such that it deprives the skilled person of the promise of the invention (decision T 608/07). Under those circumstances, said objection does not support a lack of sufficient disclosure.

That conclusion is supported by the fact that the arguments submitted by the opponent in the current proceedings confirm that the measurement of domain sizes is usual and may be performed using routine experimentation, as shown on request by the opponent by two independent laboratories in respect of the public prior use objections (see below). Hence, the skilled person could have carried out the teaching of the patent in suit by employing usual skills or in the light of common general knowledge.

3.4.3 It is not disputed that the patent in suit provides at least one method to determine domain sizes, namely in

the case of a polyester matrix containing minor amounts of polyamide as incompatible filler. The opponent's objection according to which the skilled person would not be in a position to determine domain sizes over the whole scope of the claims, e.g. for different fillers that do not dissolve (such as those indicated in paragraphs [0062] or [0064] and in granted claim 11) or for different matrix/filler systems (e.g. having similar resistance to the acid employed for the etching) is not supported by the evidence. It was also not shown that no method exist for such systems. In the present circumstances of the case, the opponent has failed to discharge its burden of proof.

During the oral proceedings before the Board, it was also submitted by the opponent that the etching process indicated in the patent in suit influenced the determination of the domain sizes. However, even if this would be true – which is plausible - there is no evidence on file that said issue would be such as to amount to a lack of sufficiency (Art. 83 EPC) rather than clarity (Art. 84 EPC).

3.5 Plane of cut - Height of cut - SEM pictures

3.5.1 According to granted claim 1, the domains are those determined "in a plane essentially parallel to the surface of" the article claimed. It is not clear from the wording of the claim itself how that wording is to be read e.g. when the article is a bottle. The wall of the bottle being curved, it is in particular questionable which plane is to be considered as being "parallel to the surface".

In that respect, it was clarified during the oral proceedings of 14 October 2014 that the patent in suit

consistently discloses that the plane of cut is the axial plane of the article perpendicular to the line of sight (paragraphs [0019]-[0021], [0027], [0035] and [0043]). Under these circumstances, the unclear term of the claim is to be read according to the single definition provided in that respect in the patent in suit.

3.5.2 D50 and the calculations provided in D33 (declaration 8) were submitted in order to show that different domain size distribution may be obtained depending on the location of the cut or of where the SEM picture(s) is/are taken, arguably because during the stretching process, different parts of the wall of the article will be subjected to different stress forces e.g. in the inside or outside part of the wall of the article.

(a) D50 was announced in the opponent's statement of grounds of appeal and filed in a reasonable time afterwards. As explained above, D50 was filed in order to support the opponent's objection regarding the lack of sufficient disclosure which had not been followed by the opposition division. The opponent was maintaining therewith the same line of argumentation as presented in the first instance proceedings and provided additional experiments to support its position before the Board. Although those data could have been filed in the first instance proceedings, they are considered to represent an appropriate response to the reasons underlying the contested decision. For these reasons, there was no reason not to admit D50 to the proceedings (Art. 12(4) RPBA). However, see also section 5.4.4 below regarding the parties

interpretations of D50.

(b) Even if, to the opponent's benefit, the argument that different domain size distributions may be obtained depending on the location at which the measurement is performed were to be followed, there is no evidence on file that said ambiguity would be such as to amount to a lack of sufficient disclosure. In the particular circumstances of the case, and in the absence of evidence that said ambiguities would be such as to prevent the skilled person from appropriately selecting a light absorbent composition in order to substantially mask any visual haze, it is credible that the skilled person would generate sufficient SEM images in order to permit a reliable assessment of the domains size distribution throughout the whole wall of the article, which could in certain cases necessitate generating several SEM images, to avoid the extremities of the walls, and/or to vary the height of measurement.

Therefore, those objections are not considered to amount to a lack of sufficient disclosure in the sense of Art. 83 EPC.

3.6 Other components

3.6.1 According to paragraph [0070] of the patent in suit, there may be incorporated into the polymer matrix further components in addition to the incompatible filler and/or the colorant, those components possibly being present as separate dispersed phases. However, should such a phase be present, said additive would constitute an "incompatible filler" and would also be

regarded as a domain according to granted claim 1.

3.6.2 Granted claim 1 is directed to "A transparent article" made from a composition comprising e.g. a pigment as light absorber (granted claim 14; paragraph [0074]), pigments having a particle size in the visible domain not being excluded. The definition of the incompatible filler of granted claim 1 encompasses opaque materials e.g. clays (granted claim 11 and paragraphs [0062]-[0064]) and/or permits this to be present in high amounts of up to 50 wt.%. Considering that it was not shown by any evidence that it would not be possible to prepare transparent articles from such compositions, the opponent's objections in that respect cannot be followed.

3.7 In view of the above, the patent in suit provides sufficient information how to carry out the invention defined in granted claim 1.

Granted claim 17

3.8 Compared to claim 1, claim 17 is directed to a process wherein a first bottle is made from a blend of polyester as matrix and a filler, on which the distribution of domain sizes is determined; then the light absorbent composition is selected so that it absorbs light in a region that “at least substantially covers the range of dimensions of the domains in the polyester”; finally, a second bottle is made wherein the light absorbent composition is added to the polyester and the filler so as to “substantially mask any visual haze”. The main differences are therefore that

- claim 17 is limited to a process for the preparation of a transparent article from a three

component mixture (polymer matrix; incompatible filler; light absorbent). The embodiment of claim 1 concerning articles in which the light absorbent is in a separate layer or in a different part of an article than the polymer/filler system is not encompassed by claim 17;
- multilayer articles are not covered by claim 17 any more;
- polyester is used as the major component i.e. polymer matrix.

The issues addressed above in respect of granted claim 1 are equally relevant for granted claim 17. Considering that no other objection was raised by the opponent as compared to those submitted in respect of granted claim 1, the patent in suit provides sufficient information how to carry out the invention defined in granted claim 17.

Granted claim 25

3.9 Claim 25 differs from granted claim 1 in the manner how the light absorbent composition is defined. Instead of using a criterion directed to the "absorption in a region of wavelength that at least substantially covers the range of dimensions of the filler domains", the light absorbent composition is defined in terms such that factor X is less than 9.6, X being defined in said claim 25.

As explained e.g. in paragraphs [0031] and [0119], the value of 9.6 was determined empirically and determines a threshold where visual haze starts to be reduced. The aim is to minimise said amount as much as possible i.e. X should be as small as possible. Contrary to granted claim 1, however, granted claim 25 is only

related to an absolute value of X and is not related to "masking" of visual haze. In particular, it does not require that the article without incompatible filler must exhibit “visual haze” contrary to granted claim 1.

3.10 In order to carry out the invention defined in granted claim 25, one has to be in a position to determine X unambiguously so as to select appropriately the light absorbent composition. For doing so, parameters Ai, Ni and the intensity of the light, all mentioned in claim 25, have to be determined and the following information is provided in the patent in suit in that respect:

(a) Ai is defined as the "percent of light absorbed at a wavelength i". It is further derivable from paragraph [0032] of the patent in suit that it should be such that Ai + Li =1, in which Li is the percent of light available to reflect at a wavelength i.

Regarding the method of determination of Ai, it is indicated in paragraph [0032] that "Ai is the percent of light absorbed by the article having the colorant without the incompatible filler at wavelength i": therefore, Ai is to be measured on the article (e.g. the wall of a PET bottle) prepared in the absence of filler (i.e. matrix plus colorant). It is also indicated in paragraph [0115] of the patent in suit that "the thickness of the article is captured in the absorbance reading taken for the wall of the article" and in paragraph [0116] that "the percent light absorbed was obtained by the absorbance spectra which is a function of the thickness of the wall", which confirms that Ai is measured on an article

obtained from a polymer/light absorbent composition in the absence of the filler. Figs. 8-9 of the patent in suit also illustrate the absorption properties of the "neat" colorant e.g. as obtained from the producer. Those data give a first, rough estimate of in which domains the colorant is effective. On the basis of that information (Figs. 8-9), the practitioner will make a bottle with a "promising" colorant and measure Ai on the article thus obtained (Figs. 10-12). Although not explicitly disclosed in the patent in suit, should the light absorbent composition not be present within the polymer matrix (e.g. multilayer article), the same procedure could be followed. In these circumstances, the skilled person is taught how to determine Ai from the information provided in the patent in suit as a whole.

(b) Ni is defined in granted claim 25 as the number of domains per hundred square microns at wavelength i: it defines the number of domains of a specific dimension and is determined as explained above in respect of granted claim 1 i.e. on an article obtained from the polymer/filler blend without colorant.

As explained in respect of granted claim 1, considering that there is no unambiguous definition of the "dimension" to be considered for the measurement, it is possible that different histograms of the dimensions of the domains may be obtained for a given article and since different methods are likely to lead to different results, there may be some discrepancy between the methods at the limit value of 9.6, whereby one method

would lead to the conclusion that an absorber is suitable, the other one would not.

The opponent further argued in D32 (simulation), D36 (bottle: section 2 on pages 2-3), in its statement of grounds of appeal (pages 19-20) and in D50 that depending on where the cut is made within the wall of the article, one could also arrive at different values of X, in particular sometimes above 9.6 and sometimes below. However, although those data may imply that the determination of Ni may be ambiguous, there is no evidence that the ambiguity is such as to amount to a lack of sufficiency. The skilled person is provided with at least some information, in particular in the examples, in order to determine Ni and, so, appropriately to select the light absorbent composition in order to prepare an article as defined in claim 25.

That conclusion is reinforced by the fact that for the objections of public prior use 1 and 2, the opponent apparently had no difficulty in making the measurements, which demonstrates that the skilled person is able to perform such measurements.

(c) The intensity of the light specified in granted claim 25, which is derivable from Beer's law (see appellant 01's letter dated 16 August 2011, page 6; see also D9: page 13) is a feature which is not reflected in the claim but that may optionally be required in the case that a light source is used which does not emit homogeneously at each wavelength. It corresponds to parameter Ii as indicated in paragraphs [0033]-[0034] of the

patent in suit. Hence, according to the specification as a whole, that part of the claim is seen as an optional modification of parameter X which has to be used in specific cases. It is further indicated in paragraphs [0114]-[0115] that the definition of X given in claim 25 is valid under the assumption of constant intensity of light (page 17, line 23). Therefore, that feature does not, in the present circumstances of the case, give rise to a lack of sufficiency.

(d) In view of the above, the patent in suit provides sufficient information how to carry out the invention defined in granted claim 25.

Granted claim 39

3.11 Granted claim 39 is directed to a process for making a transparent article corresponding to that of granted claim 25 in which the polymer is a polyester and limited to articles made from a blend of polyester/ filler/light absorbent composition. Granted claim 39 further imposes that the article made without light absorbent composition exhibits haze, which is "substantially" masked when the light absorbent composition is used (see last two lines of claim 39).

The issues addressed above in respect of granted claim 25 are equally relevant for granted claim 39. Considering that no other objection was raised by the opponent, the patent in suit provides sufficient information how to carry out the invention defined in granted claim 39.

Granted claim 48

3.12 Claim 48 is directed to a method "for masking visual haze" i.e. it is characterised by the same feature as discussed above in respect of granted claim 1. Considering that no specific objection was raised against claim 48, the same conclusion as for claim 1 apply and the requirements of Art. 83 EPC are met.

Granted claim 49

3.13 Granted claim 49 is directed to an article similar to that according to claim 25, but limited to polyester as matrix and to articles made from a blend polyester/ filler/colorant. Besides, the reference to intensity is not indicated.

The issues addressed above in respect of granted claim 25 are equally relevant for granted claim 39. Regarding the absence of the requirement on intensity, there are some clear indications in the specification that X as defined in claim 49 represents the usual case using homogeneous light for measuring Ai (see paragraphs [0033] and [0114]. Therefore, the absence of the optional feature does not amount to a lack of sufficiency.

Considering that no other objection was raised by the opponent, the patent in suit provides sufficient information how to carry out the invention defined in granted claim 39.

3.14 No additional objections were raised in respect of any of the claims depending on the above discussed claims 1, 17, 25, 39, 48 and 49.

3.15 Consequently, the requirements of Art. 83 EPC are met.

4. Public prior uses

4.1 The opponent filed evidence in respect of two different alleged public prior uses (APPE bottle and ALPLA bottle). However, both objections were filed not together with the statement of grounds of appeal but only in later submissions. Therefore, their admission into the proceedings is a matter for the discretion of the Board. Hereby *inter alia* the complexity of the new subject-matter, the state of the proceedings and the need for procedural economy are to be taken into account (Art. 13(1) RPBA).

4.2 According to the case law of the EPO, in order to substantiate a public prior use the following circumstances have to be clarified:
(i) when the act of prior use occurred;
(ii) what was made available to the public through that use; and
(iii) the circumstances of the act of use, i.e. where, how and by whom the subject-matter was made public through that use. Furthermore, the standard of proof should be "up to the hilt" i.e. beyond any reasonable doubt (Case Law of the Boards of Appeal of the EPO, 7th Edition, 2013, IV.D.3.3.3 and III.G.4.3.2).

4.3 Both of the opponent's objections concern PET bottles that were submitted as additional closest prior art but were also allegedly novelty destroying. Considering that the ground pursuant Art. 100(a) EPC and Art. 54 EPC was not invoked in the notice of opposition and was not introduced by the opposition division, admitting the public prior use into the proceedings would have necessitated deciding whether the objections thus raised in fact amounted to introducing a fresh ground of opposition at the appeal stage, which is not

allowable without the consent of the patent proprietor (G 10/91: section 18 of the reasons). Therefore, the public prior use objections raise new and complex formal issues.

4.4 Apart from the above indicated formal issue, the public prior use objections are also related to the following substantive issues:

4.4.1 Since Ai (granted claim 25) is to be determined on the article without filler, it is questionable how X could be calculated on the alleged public prior use articles (both public prior uses).

4.4.2 Regarding the first public prior use objection (APPE bottle):

No indication was given when the bottle was actually placed in the display show case for advertising or over what period of time it was so displayed. The date on the neck portion is not sufficient to demonstrate public availability. Besides, said bottle was only shown as an exhibit (display show case) and there is no evidence that it was effectively sold or available on the market or was representative of bottles that were. The question in particular arises whether it could have been determined merely by examining said article if e.g. an incompatible filler was present, if domains of 400-700 nm were present, and/or if factor X was fulfilled. On the contrary, all the evidence relied upon by the opponent required a destruction of the bottle, which would not have been possible on the bottle presented as an “exhibit in a show case”.

The opponent had proposed that Mr. Jansen be heard as a witness to provide evidence regarding the public

availability. However, although Mr. Jansen was present and announced at the beginning of the oral proceedings before the Board held on 14 October 2014, Mr. Jansen decided to leave Munich in the course of the oral proceedings, without informing the Board, and was not available to be heard by the Board when the issue was effectively addressed. In the present circumstances of the case, considering the deficiencies in the chain of evidence identified above and considering that Mr. Jansen's decision to absent himself from the premises of the EPO while the oral proceedings were in progress, the request for hearing Mr. Jansen is refused.

4.4.3 Regarding the second public prior use objection (ALPLA bottle)

There is no evidence that the bottle analysed in D52 was effectively available to the public at the priority/filing date of the patent in suit.

4.5 In addition, if the documents supporting the public prior use had been admitted to the proceedings, the case would have had to be remitted to the first instance for further prosecution, which runs counter to procedural economy, in particular in the present circumstances of the case where there are serious doubts that there was a continuous chain of evidence supporting any of the alleged public prior uses.

4.6 For those reasons, the prior use objections are not admitted and none of the documents cited in support of the alleged prior uses (i.e. D37-D48 and D52) is admitted into the proceedings (Art. 13(1) RPBA).

5. Inventive step

Granted claim 25

5.1 Closest prior art

5.1.1 The patent in suit deals with articles comprising a light absorbent composition to mask visual haze and related methods, in particular transparent thermoplastic articles having an incompatible filler dispersed therein, wherein the light absorption of the article has been altered to effectively mask or reduce the visual haze of the article (paragraph [0002]).

5.1.2 Similar articles are known from D1, which discloses compositions, in particular for making packaging articles and plastic bottles, comprising as oxygen barrier material a condensation copolymer having a polyester backbone and olefin oligomer segments (claim 1; col. 1, lines 5-17) and optionally colorants (col. 18, line 51). Formulations are disclosed which may be fabricated into clear plastic bottles, the clarity being taught to depend on the size of the oligomer segments (col. 1, lines 15-17; col. 11, lines 12-17; col. 16, lines 50-60). Preferably, three-layered bottles according to Fig. 1 are made (col. 19, lines 9-29; col. 22, lines 12-14).

Example 18 of D1 deals with the preparation of an unoriented film sheet of a copolymer comprising predominantly PET segments and 4 wt.% PBD (polybutadiene) segments. Example 19 was identical to Example 18 except that the film sheet was biaxially oriented.

Therefore, in agreement with both parties, D1, in

particular examples 18 and 19, represents a suitable closest prior art.

5.1.3 During the second oral proceedings before the Board the opponent submitted for the first time that the closest prior art could also be represented either by the comparative example mentioned in examples 27 to 30 of D1 (so-called OxBar System) or by D3.

The filing of those objections at such a late stage of the proceedings is contrary to the stipulations of Art. 12(2) RPBA (first two sentences), according to which the statement of grounds of appeal and the reply shall contain a party's complete case.

In that respect, no justification was provided why those objections were not submitted earlier in the proceedings. Nor was it explained why those starting points would be more pertinent than examples 18-19 of D1.

Each of those objections further amounts to a complete change of case. Due to the very late stage at which these objections were raised, neither the patent proprietor nor the Board were in a position to deal with these on the occasion of the second oral proceedings. Not only would those objections have taken the patent proprietor by surprise but they were likely to raise issues which could not have been dealt with without adjournment of the oral proceedings.

Consequently, making use of its discretionary power, the Board did not admit those objections to the proceedings (Art. 13(1) and 13(3) RPBA).

5.1.4 The objection submitted in writing and based on D35 as closest prior art was explicitly withdrawn during the second oral proceedings before the Board.

5.1.5 Therefore, the films prepared in examples 18 and 19 of D1 constitute the closest prior art.

5.2 Problem to be solved in view of the closest prior art

5.2.1 According to paragraphs [0002] and [0015] of the patent in suit the problem to be solved resides in the masking or the reduction of visual haze present in articles comprising a thermoplastic polymer matrix and an incompatible filler dispersed therein.

5.2.2 However, the problem of masking, in particular the substantial masking of any visual haze, which is contemplated in the patent in suit (e.g. paragraphs [0014]-[0015]), is not relevant for the subject-matter defined in granted claim 25, which only imposes an absolute requirement in terms of factor X as defined therein but not in terms of a reduction of visual haze.

Besides, it is derivable from paragraph [0119] of the patent in suit that an X factor of 9.6 is not an indication of complete masking of haze but only of the "commencement of some masking of haze" i.e. "at least some of the haze visible to the naked eye of an observer will be masked".

5.2.3 It is further derivable from col. 25, lines 2-5 of D1 that the films prepared in examples 18-19 already show some degree of transparency. Considering that the subject-matter of granted claim 25 encompasses non haze-free articles (see previous paragraph) and in the absence of any comparison between the films of D1 and

those presently claimed, it can not be concluded that any particular effect, in particular in terms of haze reduction as compared to the closest prior art, was demonstrated by the patent proprietor.

5.2.4 Under these circumstances, the problem to be solved in view of the closest prior art, namely the films prepared in examples 18-19 of D1, can only be seen as that of providing further transparent articles.

5.3 Solution

5.3.1 It has to be determined here in which respect the subject-matter of granted claim 25 differs from that of the closest prior art.

5.3.2 D1 discloses that the oligomer segments of the copolymers defined therein are visualised by transmission electron microscopy after staining with OsO4 so that their diameter may be determined (col. 6, lines 38-46; col. 16, lines 46-50).

During the appeal proceedings, the opponent equated said oligomer segments with "domains" according to granted claim 25. However, although D1 discloses that the oligomer segments "appear to exist as small areas dispersed throughout the predominantly polyester segments of the copolycondensate" (col. 11 lines 12-17 and col. 16, lines 43-46), D1 consistently discloses that the polymeric matrix is a copolymer i.e. a polymer comprising a polyester backbone and polyolefin oligomer segments (claim 1; col. 12, lines 17-25; col. 13, lines 2, 8-11 and 39-66; col. 14, lines 5-15; col. 15, lines 5-12; col. 16, lines 42-50; examples: col. 21, lines 41-44, 63; col. 22, lines 11-14, 20-23 and 44-46). Under these circumstances, the oligomer segments of D1

constitute comonomers that form part of the polymer constituting the polymeric matrix and do not form "a discrete phase within the thermoplastic polymer matrix" and do not satisfy the feature that "each domain (...) dispersed in the matrix" as specified in granted claim 25.

In addition, the domains defined in granted claim 25 are such that they encompass at least one incompatible filler. The term "filler" is usually understood in the field of polymer chemistry as an additive incorporated into polymer compounds. That definition is in line with paragraphs [0062] and [0064] of the patent in suit as well as with D1 (col. 18, lines 49-57, "fillers" being explicitly mentioned at line 52). Although said passages of the patent in suit are explicitly indicated as being merely illustrative (it is in particular stated in the first sentence of paragraph [0062] that fillers are not "necessarily limited" to those listed there), there is no indication that the term "filler" encompasses comonomers, as argued by the opponent. Neither was it shown by the opponent that such a reading would be usual in the art. Under these circumstances, there is no reason to deviate from the general understanding of the definition of the term "filler", namely an additive present as a separate material in the polymeric matrix.

For these reasons, the oligomer segments disclosed in D1 do not correspond to domains in the sense of granted claim 25.

5.3.3 Considering that D1 fails to disclose domains in the sense of granted claim 25, D1 cannot disclose any feature in relation to the size of such domains and corresponding to either the term $\Sigma(Ni)$ or factor X

according to granted claim 25. Therefore, none of the opponent's arguments submitted in respect of either Fig. 2 or Fig. 5 of D1, in particular in respect of the domain sizes disclosed, are relevant for the present decision.

5.3.4 Although colorants and additives can be present in the compositions of D1, they are not preferred when clarity is required (col. 18, lines 49-57; col. 19, line 59 to col. 20, line 32). The examples of D1 were all performed without additives apart from cobalt octoate (col. 21, line 66), which appears to be an oxygen catalyst having oxygen scavenging properties as disclosed in col. 19, lines 59-67. It was neither shown nor argued that cobalt octoate is an incompatible filler having dimensions from 400 to 700 nm and/or a light absorbent composition in the sense of granted claim 25.

5.3.5 For these reasons, the subject-matter of granted claim 25 differs from D1, in particular the film sheets prepared in examples 18-19, in that:

- the article comprises domains containing an incompatible filler, said domains having dimensions of from about 400 nm to about 700 nm dispersed in the matrix and forming a discrete phase therein;
- the article comprises at least one light absorbent composition;
- the incompatible filler and the light absorbent composition are such that X is less than 9.6.

5.4 Success of the solution

5.4.1 The examples given in Table III together with Figs. 11 and 12 and paragraph [0119] of the patent in

suit show that the problem defined above is solved, at least for PET as matrix, MXD6 as incompatible filler and three different colorants.

The same conclusion is drawn in respect of the articles submitted by the patent proprietor with D53.

5.4.2 The opponent has provided no evidence in support of the objection that it had not been shown that the same conclusion would be valid for any combination of polymer, filler and light absorbent composition falling under the scope of granted claim 25. Therefore, this objection must be dismissed due to lack of substantiation.

5.4.3 Tables 1 and III of the patent in suit relate to different experiments performed using bottles of different sizes and having different amounts of colorants (page 14, lines 55-58 and page 17, lines 42 and 46-47). Furthermore, the tests performed in those examples also differ, Table 1 being directed to complete masking of haze without evaluation of factor X while Table III evaluates the commencement of the masking of visual haze based on the determination of factor X. Therefore, the results presented in these tables are not directly comparable. As a consequence the evidence of these tables provides no support for the opponent's argument, invoking these data, that the problem was not solved over the whole scope of the claims.

5.4.4 As indicated in paragraph [0119] of the patent in suit, the criticality of a factor X of less than 9.6 was determined empirically. The opponent's objection that the value of 9.6 was purely arbitrary and not limiting is, thus, inconsistent with the conclusions presented

in paragraph [0119] of the patent in suit which are based on the above discussed data of Table III.

Regarding D50, which was also relied upon by the opponent to argue that X should not be considered as a limiting feature, it was already concluded above in respect of Art. 83 EPC that in order to obtain a meaningful determination of X, it may be necessary to prepare a series of micrographs in order to evaluate sufficient domains and so achieve convergence of the measurement, which was not done in D50 (see hereinabove, section 3.5.2.b). In addition, during the second oral proceedings before the Board, the patent proprietor further showed that the values of X = 9.1 or 9.2 (D50: page 7) were not consistent with the values resulting from visual inspection of Figs. 1b and 2b of D50. The opponent could not, on the occasion of the oral proceedings provide any explanation for said apparent discrepancy.

Under these circumstances, the opponent's objection based on D50 is dismissed.

5.4.5 The opponent considered that articles for which the term ΣNi would be less than 9.6 in the absence of the light absorbent composition would not solve the above problem. However, the opponent did not show that such an article belonged to the state of the art at the priority/filing date of the patent in suit. Besides, it is not clear how such an article would be related to the closest prior art identified above. Therefore, that objection did not convince.

5.4.6 The opponent argued that D25 showed that the problem would not be solved on the whole scope of the claim.

In D25 the opponent found that in a specific case no conclusion could be reached whether or not "visual haze was substantially masked". Such a situation is also described in the patent in suit (Tables 1 and II: "--: inconclusive"). However, considering that D25 does not refer to factor X according to granted claim 25 and that the effect "to substantially mask any visual haze" does not form part of the problem solved identified above, D25 is not relevant in respect of granted claim 25.

In that respect, the patent in suit also shows that the masking of haze does not depend only on the nature of the colorant but also on its concentration: see e.g. Table III: Renol Red and Tersar Blue may suitably work but only at a concentration of 0.1 %, as explicitly indicated at the beginning of paragraph [0119]. The last sentence of [0119] further renders credible that D25 is in line with the teaching of the patent in suit: the test performed in D25 shows that Renol Red has an impact on haze (last sentence of [0119]) but it may be required to increase its concentration in order to mask the haze.

Therefore, the opponent's objection based on D25 was not followed.

5.4.7 The opponent considered that no problem would be solved when the polymeric matrix and the filler exhibited similar refractive indices.

However, an article according to such an embodiment would, following the opponent's conclusion, be transparent and, thus, solve the technical problem identified above. Therefore, that objection is not

convincing.

5.4.8 The opponent argued that granted claim 25 encompassed multipart articles, in which some parts could be opaque and/or transparent.

However, the wording of granted claim 25 is directed to "a transparent article comprising". There is no apparent reason to deviate from the literal wording of the claim which specifies that the article as a whole is transparent and that said article comprises the matrix, the domains and the light absorbent composition defined in granted claim 25. The opponent's objection is, thus, rejected.

5.4.9 For these reasons, it may be concluded from the evidence on file that the problem identified above is effectively solved.

5.5 Obviousness

5.5.1 The question has to be answered whether the skilled person desiring to solve the above identified problem would, in view of the prior art, have modified the disclosure of the closest prior art in such a way as to arrive at the claimed subject matter.

5.5.2 D1 provides clear polymeric articles having good barrier properties by using new PET copolymers comprising oxygen barrier active monomers. According to col. 3, line 49 to col. 4, line 23 of D1, that solution was chosen among other possibilities such as that of using additives. In col. 14, lines 20-28 of D1 it is further taught that certain physical blends were not satisfactory. However, the use of further additives is within the ambit of D1 (col. 18, lines 49-57; col. 19,

line 59 to col. 20, line 32), although not preferred when clarity is required (col. 18, lines 49-54).

It was acknowledged during the current proceedings that additives having dimensions in the visible range (400-700 mm) may cause haze (the patent proprietor's reply to the notice of opposition of 18 August 2008: page 4, section i; see also the documents cited in the decision of the opposition division as indicated in section III above). Under these circumstances, the skilled person using additives in the compositions of D1 would avoid using those having such dimensions. That conclusion is further in line with the teaching of D1 that to improve clarity the dimensions of the comonomer segments should exhibit a size distribution predominantly under 300 mm (col. 17, lines 59-65; see also col. 17, lines 50-58).

Under such circumstances, the skilled person would, on the basis of the teaching of D1 alone, not have been motivated to solve the above problem by adding an incompatible filler in the compositions prepared in examples 18-19, in particular not a filler having dimensions as defined in granted claim 25.

5.5.3 There is further no document on file disclosing the use of a light absorbent composition together with "domains" as defined in granted claim 25, in particular wherein the light absorbent is selected so as to absorb light as defined in granted claim 25 i.e. in relation to the dimensions of the domains containing an incompatible filler. There is therefore also no hint in those documents to proceed in such a manner in order to affect the clarity or haze of an article.

For these reasons, also the combination of D1 with any

of D6, D7 or D8, which were relied upon by the opponent, cannot render obvious the subject-matter defined in granted claim 25.

5.5.4 Therefore, the subject-matter of granted claim 25 and of the granted claims depending thereon fulfills the requirements of Art. 56 EPC.

Granted claims 39 and 49

6. No additional arguments were submitted by the parties in respect of those claims. The Board sees no reason to deviate from that view.

For the same reasons as above, the subject-matter of granted claims 39 and 49, and that of each claim of the granted patent depending thereon fulfills the requirements of Art. 56 EPC.

7. Granted claims 46 and 47

Granted claim 46 is directed to the process of claim 17 and specifies a specific value for X, which is however not indicated in granted claim 17.

Granted claim 47 is directed to a process but refers to claim 25, which is directed to a product.

Under these circumstances, considering the literal wording of each of granted claims 46 and 47, those claims are not considered to be dependent on any of granted claims 25, 39 ad 49. Consequently the above conclusions do not apply to either of claims 46 or 47.

Granted claims 1, 17 and 48 - Remittal

8. The issue of the inventive step of any of granted claims 1-24 and 48 has not been addressed in the contested decision.

Since the subject-matter of granted independent claims 1, 17 and 48 is defined in different terms from that of granted independent claims 25, 39 and 49 (see e.g. factor X; (substantial) masking of haze), the analysis of the inventive step and the issues to be considered in that respect may differ e.g. in respect of the choice of the closest prior art or of the definition of the problem effectively solved. It is conspicuous that the first instance has not dealt with the issue of the inventive step of those granted claims at all in the contested decision. Nor was it addressed by the parties e.g. during the oral proceedings before the opposition division. Therefore, in the present circumstances of the case, the Board held it to be appropriate to remit the case to the first instance for further prosecution (Art. 111(1) EPC).

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.

The Registrar: The Chairman:

B. ter Heijden M. C. Gordon

Decision electronically authenticated