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Datasheet for the decision of 12 March 2025

Case Number: T 2595/22 - 3.3.03

Application Number: 18750908.8

Publication Number: 3476890

IPC: C08K5/11, C08K5/00, C08K5/12

Language of the proceedings: EN

Title of invention:
PLASTICIZER COMPOSITION AND RESIN COMPOSITION INCLUDING THE SAME

Patent Proprietor:
LG Chem, Ltd.

Opponent:
Evonik Operations GmbH

Relevant legal provisions:
EPC Art. 56, 123(2)
RPBA 2020 Art. 12(6)

Keyword:
Inventive step - (yes)
Amendments - allowable (yes)
Late-filed objection - admitted (no)

Decisions cited:
G 0003/89, G 0011/91, G 0002/10

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Case Number: T 2595/22 - 3.3.03

D E C I S I O N
of Technical Board of Appeal 3.3.03
of 12 March 2025

Appellant: (Opponent)	Evonik Operations GmbH F-LE-LIC Rellinghauserstrasse 1-11 45128 Essen (DE)
Representative:	Godemeyer Blum Lenze Patentanwälte Partnerschaft mbB - werkpatent An den Gärten 7 51491 Overath (DE)
Respondent: (Patent Proprietor)	LG Chem, Ltd. 128 Yeoui-daero Yeongdeungpo-gu Seoul 07336 (KR)
Representative:	Plasseraud IP 104 Rue de Richelieu CS92104 75080 Paris Cedex 02 (FR)
Decision under appeal:	**Interlocutory decision of the Opposition Division of the European Patent Office posted on 21 October 2022 concerning maintenance of the European Patent No. 3476890 in amended form.**

Composition of the Board:

Chairman	D. Semino
Members:	O. Dury
	W. Ungler

Summary of Facts and Submissions

I. The appeal of the opponent lies from the interlocutory decision of the opposition division concerning maintenance of European patent No. 3 476 890 in amended form according to the claims of the 1st auxiliary request filed with letter of 26 July 2022 and an adapted description.

II. Claims 1 to 3, 6, 8 and 9 of the application as filed read as follows:

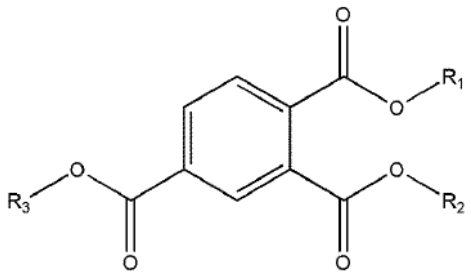
"1. A plasticizer composition, comprising:

a terephthalate-based plasticizer in which each of two alkyl groups bound to a diester group independently has 4 to 10 carbon atoms; and

a trimellitate-based plasticizer represented by Formula 1 below,

wherein an epoxidized oil is not contained in the plasticizer:

[Formula 1]



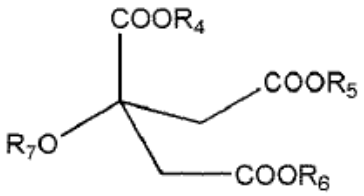
in Formula 1, R_1 to R_3 are each independently an alkyl group having 4 to 10 carbon atoms."

"2. The plasticizer composition of claim 1, wherein the terephthalate-based plasticizer and the trimellitate-based plasticizer are included at a weight ratio of 90:10 to 10:90."

"3. The plasticizer composition of claim 1, further comprising:

a citrate-based plasticizer represented by Formula 2 below:

[Formula 2]



in Formula 2, R_4 to R_6 are each independently an alkyl group having 5 to 9 carbon atoms, and R_7 is hydrogen."

"6. The plasticizer composition of claim 1, wherein R_1 to R_3 in Formula 1 are each independently selected from the group consisting of a normal butyl group, an isobutyl group, a normal pentyl group, an isopentyl group, a normal hexyl group, a normal heptyl group, an isoheptyl group, a normal octyl group, an isooctyl group, a 2-ethylhexyl group, a normal nonyl group, an isononyl group, a 2-propylheptyl group, and an isodecyl group."

"8. A resin composition, comprising:

100 parts by weight of a resin; and

5 to 150 parts by weight of the plasticizer composition of claim 1."

"9. The resin composition of claim 8, wherein the resin is selected from the group consisting of ethylene vinyl acetate, polyethylene, polypropylene, polyketone, polyvinyl chloride, polystyrene, polyurethane, and a thermoplastic elastomer."

III. The following documents, among others, were cited in the decision under appeal:

D2: US 2013/0317152 A1
D5: CN 101875747 A
D5a: English translation of D5
D6: Allen D. Godwin, "28 Plasticizers"; Excerpt from the textbook by Myer Kutz (publisher) "Applied Plastics Engineering Handbook", Elsevier, William Andrew Verlag, 2011
D7: US 2015/0232411 A1
D8: WO 2018/024596 A1
D9: Experimental report "Experimental account of measurements of volume resistance" filed by the patent proprietor with letter of 4 June 2021

IV. The decision under appeal was based among others on the claims of the 1st auxiliary request filed with letter of 26 July 2022. In so far as relevant to the present case, the following conclusions were reached in the decision in regard of this auxiliary request:

- No objections had been raised pursuant to Article 123(3) EPC.

- The objections raised regarding lack of sufficiency of disclosure (Article 100(b) EPC), Article 123(2) EPC, Article 84 EPC and Article 54 EPC were rejected.

- The claimed subject-matter involved an inventive step when either document D2 or document D7 was taken as the closest prior art.

For these reasons, the patent as amended according to the 1st auxiliary request was held to meet the requirements of the EPC.

V. The opponent (appellant) lodged an appeal against that decision.

VI. With the rejoinder to the statement of grounds of appeal, the patent proprietor (respondent) requested the dismissal of the appeal as main request and filed various sets of claims as 1st, 2nd, 4th, 5th, 8th, 10th and 11th auxiliary requests.

VII. The parties were summoned to oral proceedings and a communication pursuant to Article 15(1) RPBA indicating specific issues to be discussed at the oral proceedings was then sent to the parties.

VIII. Oral proceedings were held on 12 March 2025 in the presence of both parties.

IX. **The final requests of the parties were as follows**:

(a) The appellant requested that the decision of the opposition division be set aside and the patent be revoked.

(b) The respondent requested that the appeal be dismissed (main request) or, in the alternative, that the patent be maintained in amended form on the basis of one of the following auxiliary requests, in this order:

- 1st or 2nd auxiliary requests filed with the rejoinder to the statement of grounds of appeal;
- 3rd auxiliary request, filed as 5th auxiliary request with letter of 26 July 2022;
- 4th or 5th auxiliary requests filed with the rejoinder to the statement of grounds of appeal;
- 6th auxiliary request, filed as 7th auxiliary request with letter of 26 July 2022;
- 7th auxiliary request, filed as 3rd auxiliary request with letter of 26 July 2022;
- 8th auxiliary request filed with the rejoinder to the statement of grounds of appeal;
- 9th auxiliary request, filed as 6th auxiliary request with letter of 26 July 2022;
- 10th or 11th auxiliary requests filed with the rejoinder to the statement of grounds of appeal;
- 12th auxiliary request, filed as 8th auxiliary request with letter of 26 July 2022.

X. Claims 1, 2, 6 and 7 of the **main request**, which are the only claims of this request that are relevant to the present decision, read as follows (additions as

compared to claims 1, 3, 8 and 9 as originally filed, respectively, in **bold**, deletions in ~~strikethrough~~):

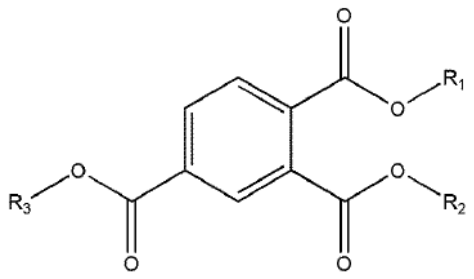
"1. A plasticizer composition, ~~comprising~~ **consisting of**:

a terephthalate-based plasticizer in which each of two alkyl groups bound to a diester group independently has 4 to 10 carbon atoms; and

a trimellitate-based plasticizer represented by Formula 1 below,

wherein an epoxidized oil is not contained in the plasticizer:

[Formula 1]



in Formula 1, R_1 to R_3 are each independently an alkyl group having 4 to 10 carbon atoms,

wherein the terephthalate-based plasticizer and the trimellitate-based plasticizer are included at a weight ratio of 90:10 to 10:90, and

wherein R_1 to R_3 in Formula 1 are each independently selected from the group consisting of a normal hexyl group, a normal heptyl group, an isoheptyl group, an isooctyl group, a 2-ethylhexyl group, a normal nonyl

group, an isononyl group, a 2-propylheptyl group, and an isodecyl group."

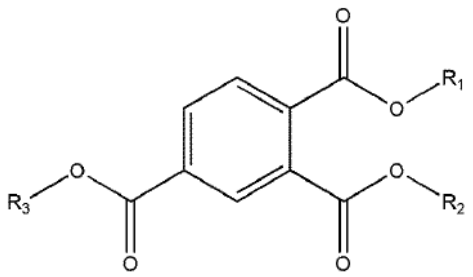
"2. ~~The plasticizer composition of claim 1, further comprising:~~ **A plasticizer composition, consisting of:**

a terephthalate-based plasticizer in which each of two alkyl groups bound to a diester group independently has 4 to 10 carbon atoms; and

a trimellitate-based plasticizer represented by Formula 1 below,

wherein an epoxidized oil is not contained in the plasticizer:

[Formula 1]



in Formula 1, R_1 to R_3 are each independently an alkyl group having 4 to 10 carbon atoms,

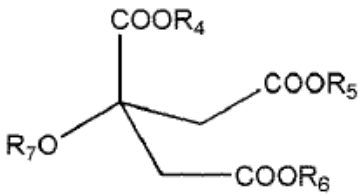
wherein the terephthalate-based plasticizer and the trimellitate-based plasticizer are included at a weight ratio of 90:10 to 10:90, and

wherein R_1 to R_3 in Formula 1 are each independently selected from the group consisting of a normal hexyl group, a normal heptyl group, an isoheptyl group, an isooctyl group, a 2-ethylhexyl group, a normal nonyl

group, an isononyl group, a 2-propylheptyl group, and an isodecyl group; and

a citrate-based plasticizer represented by Formula 2 below:

[Formula 2]



in Formula 2, R_4 to R_6 are each independently an alkyl group having 5 to 9 carbon atoms, and R_7 is hydrogen."

"6. A resin composition, comprising:

100 parts by weight of a resin; and

5 to 150 parts by weight of the plasticizer composition of claim 1 **or claim 2**;

wherein the resin composition does not contain an epoxidized oil or it is contained in less than 1 part by weight with respect to 100 parts by weight of the plasticizer composition."

"7. The resin composition of claim ~~6~~ **6**, wherein the resin is selected from the group consisting of ethylene vinyl acetate, polyethylene, polypropylene, polyketone, polyvinyl chloride, polystyrene, polyurethane, and a thermoplastic elastomer."

XI. The appellant's arguments, in so far as they are pertinent for the present decision, may be derived from

the reasons for the decision set out below. They were essentially as follows:

- Although several objections had been raised for the first time in the statement of grounds of appeal, they should nevertheless be admitted into the proceedings.

- Claims 1, 2, 6 and 7 of the main request infringed the requirements of Article 123(2) EPC.

- The subject-matter of claims 1 and 2 of the main request did not involve an inventive step over the disclosure of D2 alone. The same was valid in view of D7 alone and over the combinations of D7 with D2 or D2 with D7, in particular when the teaching of document D6 was taken into account (for each of these objections).

XII. The respondent's arguments, in so far as they are pertinent for the present decision, may be derived from the reasons for the decision given below. They were essentially as follows:

- The objections that had been raised for the first time in the statement of grounds of appeal should not be admitted into the proceedings.

- Claims 1, 2, 6 and 7 of the main request met the requirements of Article 123(2) EPC.

- The subject-matter of claims 1 and 2 of the main request involved an inventive step over the disclosure of D2 alone. The same was valid in view of D7 alone and over the combinations of documents D7 with D2 or D2 with D7, also when taking into

account the teaching of document D6 (for each of these objections).

Reasons for the Decision

Main request - 1st auxiliary request dealt with in the decision under appeal

1. The operative main request is the 1st auxiliary request which was dealt with in the decision under appeal.

2. Objections put forward in appeal

2.1 The respondent requested that the following objections that were raised against the main request for the first time by the appellant in the statement of grounds of appeal be not admitted into the proceedings:

(a) Objections pursuant to Article 123(2) EPC (against claim 1: alleged non-allowable combination of amendments based on original claims 1, 2 and 6, even in view of page 5, lines 4-9 of the application as filed; against claim 2: alleged non-allowable combination of amendments; against claims 3 to 5; against claims 6 and 7, in view of their dependency on claim 2) and new objections pursuant to Article 123(3) EPC (against claims 6 and 7);

(b) Objection pursuant to Article 100(b) EPC;

(c) Objection pursuant to Article 84 EPC;

(d) Objections pursuant to Article 56 EPC taking either D5 or D8 as the document constituting the closest prior art;

(e) Objection pursuant to Article 56 EPC based on the combination of D2 with D7.

2.2 In that respect, it remained undisputed that above objections (a) to (e) had not been submitted during the opposition proceedings, nor that they had not been dealt with in the decision under appeal. Therefore, the filing of these objections and of the submissions based thereon with the statement of grounds of appeal constitutes an amendment to the appellant's case (Article 12(2) and (4) RPBA), the admittance of which undergoes the stipulations of Article 12(4) to 12(6) RPBA.

Objections (a) to (d)

2.3 Regarding objections (a) to (d), it is agreed with the respondent that these objections constitute new lines of argument which are not directly and clearly related to the decision under appeal, i.e. the factual basis of these objections is entirely new. Therefore, it has to be assessed if the submission of these objections with the statement of grounds of appeal may be justified by the circumstances of the present case.

2.3.1 In that regard, the appellant argued in writing that these objections had not been made during the opposition proceedings because they had been taken by surprise when the then operative 1st auxiliary request (main request in appeal) was filed at the oral proceedings (appellant's letter of 26 September 2023: page 1, last paragraph).

However, as indicated in the Board's communication (section 5 and point 6.3.1, beginning of the second paragraph), it is derivable from the file history that the claims of the then operative 1st auxiliary request (i.e. the 1st auxiliary request dealt with at the oral proceedings before the opposition division and in the decision under appeal) were filed for the first time about two months ahead of the oral proceedings. The appellant eventually agreed with that view in a later written submission (letter of 3 February 2025: bottom of page 1, "Wir bestatigen, keine andere Auffassung zu vertreten"), which statement was confirmed during the oral proceedings before the Board. In this circumstances, the Board considers that the opponent had sufficient time to consider the claims of the operative main request (i.e. the 1st auxiliary request dealt with in the decision under appeal) and raise any objection they deemed necessary already during the opposition proceedings. In addition, it is noted that i) several objections pursuant to Article 123(2) EPC, Article 100(b) EPC, Article 84 EPC were eventually raised against the operative claims at the oral proceedings before the opposition division (see point IV of the section Facts and Submissions above and the minutes of the oral proceedings) and ii) no request to postpone the oral proceedings was made by the opponent (which could/should have been done if they had estimated that they needed more time to deal with the last set of operative auxiliary requests filed by the patent proprietor about two months ahead of the oral proceedings). For these reasons, the Board considers that the circumstances of the present case do not justify the admittance of any of objections (a) to (d) at such a late stage of the proceedings.

2.3.2 The appellant's view that the objections first raised in the statement of grounds of appeal should be admitted because, pursuant to Article 114(1) EPC, the EPO was obliged to examine the facts of its own motion (letter dated 26 September 2023: page 2, first full paragraph) is not persuasive, in particular in view of the established case law that new submissions in appeal proceedings may be disregarded by the Board as a matter of discretion under Article 114(2) EPC, which limits the Board's inquisitorial duties under Article 114(1) EPC (Case Law of the Boards of Appeal of the EPO, 10th edition, 2022, V.A.4.1.1.a). In addition, the appellant's argument is not in line with the stipulations of Article 12(2) RPBA that, in view of the primary object of the appeal proceedings to review the decision under appeal in a judicial manner, a party's appeal case shall be directed to requests, facts, objections, arguments and evidence on which the decision under appeal was based.

2.3.3 For the same reasons, the appellant's view that the objections pursuant to Article 123(2) and 123(3) EPC should be admitted considering the general accepted principle of the protection of legitimate expectation is not convincing (letter of 26 September 2023: page 2, second full paragraph, with reference to the "Gründen des Vertrauenschutzes").

2.3.4 The appellant further argued that the objections should be admitted in view of their alleged *prima facie* relevance (*ibid*: page 2, penultimate paragraph).

However, it is derivable from Article 12(4) to 12(6) RPBA that the decisive criteria regulating the admittance of objections filed for the first time with the statement of grounds of appeal are primarily of

procedural nature, i.e. the question to be answered is - as already indicated above - whether the circumstances of the case may justify the filing of new/additional objections at such a late stage of the proceedings. However, for the reasons indicated above, this is not the case here. Therefore, the appellant's argument is rejected.

2.3.5 In view of the above, the Board made use of its discretion pursuant to Article 12(6) RPBA and did not admit into the proceedings any of objections (a) to (d) indicated in above point 2.1. For that reason, these objections are not addressed any further in the present decision.

Objection (e)

2.4 Regarding objection (e), although it remained undisputed that such an objection was not raised during the opposition proceedings, the Board considers that the line of argument based on the combination of D2 with D7 put forward by the appellant in the statement of grounds of appeal is very similar to the one based on D2 alone, which was dealt with in the decision under appeal but did not convince the opposition division. Therefore, raising objection (e) in the statement of grounds of appeal does not amount to presenting a fresh case in appeal. Rather, said objection is held to constitute a reasonable reaction to the conclusion reached by the opposition division in the decision under appeal, which was negative for the appellant, and only a development of the case in view of that. Therefore, the Board made use of its discretion pursuant to Article 12(4) RPBA to admit the objection pursuant to Article 56 EPC based on the combination of

D2 with D7.

2.5 The appellant further argued at the outset of the appeal proceedings that the subject-matter of claims 1 and 2 of the main request did not involve an inventive step in view of D7 in combination with D2 (statement of grounds of appeal: page 13, first bullet point and page 14, first bullet point), which are also objections that had not been submitted during the opposition proceedings. However, the respondent did not object to the admittance of these objections. No objection in this regard was in particular raised at the oral proceedings before the Board and this, although this issue had been explicitly mentioned in the Board's communication, whereby it was indicated that the Board would be inclined to draw in this respect the same conclusion as the one regarding the admittance of the objection of lack of inventive step based on D2 in combination with D7. In these circumstances, there are no reasons to disregard the objection of lack of inventive step raised against claims 1 and 2 of the main request in view of D7 in combination with D2, i.e. this objection is in the proceedings.

3. Article 123(2) EPC

3.1 In view of the conclusion reached in point 2.3.5 above, the sole objections pursuant to Article 123(2) EPC dealt with hereinafter concern the amendments related to the term "consisting of" and the definition of groups R_1 to R_3 in claims 1 and 2 of the main request as well as the one directed to the embodiment of claim 6 of the main request "wherein the composition does not contain an epoxidized oil".

3.2 In order to assess if the requirements of Article 123(2) EPC are met, the question to be answered is whether or not the subject-matter of an amended claim, here claims 1 and 2 of the main request, extends beyond the content of the application as filed, i.e. whether after the amendments made the skilled person is presented with new technical information (see G 2/10, point 4.5.1 of the Reasons and Case Law, *supra*, II.E.1.1). To be allowable the amendments can only be made within the limits of what a skilled person would derive directly and unambiguously, using common general knowledge, and seen objectively and relative to the date of filing, from the whole of the documents as filed (G 3/89; G 11/91).

Claim 1 of the main request

3.2.1 The appellant argued that the amendment "consisting of" in claim 1 of the main request led to added-matter.

However, the appellant did not explain why they considered that the finding of the opposition division that the examples of the application as filed provided a valid support for that amendment (point 5.2.2.1.a of the reasons) was not correct. In addition, no counter-arguments were put forward by the appellant either in writing or at the oral proceedings before the Board to refute the respondent's view that an additional support for that amendment was provided at page 5, line 17 to page 6, line 2 of the application as filed (rejoinder: point 2.3), even after the Board had indicated that the respondent's considerations appeared reasonable (Board's communication: point 7.2.1, end of second paragraph). For these reasons, the appellant's argument is not convincing and provide no cause for the Board to deviate from the conclusion reached by the opposition

division in this respect.

3.2.2 The appellant argued that the amendment "and wherein R_1 to R_3 ..., and an isodecyl group" amounted to a selection of only some of the alternatives specified in claim 6 of the application as filed, which led to an extension beyond the content of the application as filed.

In this regard, it was undisputed that the amendment made in claim 1 of the main request that is directed to the definition of the rests R_1 to R_3 in Formula 1 is mainly based on claim 6 of the application as filed. Also, it was common ground that the list of rests R_1 to R_3 specified in claim 6 as originally filed contains several components that are not present in the definition of these rests in operative claim 1. In this respect, the Board agrees with the opposition division and the respondent that the amendments made regarding the definition of groups R_1 to R_3 in Formula 1 amount to the mere deletion of various alternatives originally defined in claim 6 of the application as filed without "singling out" a particular combination (reasons: page 13, first paragraph; rejoinder: page 4, point 2.2). Therefore, said amendment amounts to a mere shrinking of the definition of the trimellitate based plasticizer according to original claim 6. In particular, said amendment does not result in the skilled person being presented with new technical information. For these reasons, the amendment "wherein R_1 to R_3 ..., and an isodecyl group" made in claim 1 of the main request is directly and unambiguously derivable from the application as filed.

Claim 2 of the main request

3.2.3 The appellant argued that the same objections as the ones raised against claim 1 of the main request were also valid for claim 2 of the main request, for the same reasons.

a) In that respect, the main support in the application as filed for claim 2 of the main request is original claim 3, whereby the same amendments were made as the ones indicated above for claim 1 of the main request.

b) Regarding the amendment "consisting of", the same considerations as the ones outlined in point 3.2.1 above are equally valid considering both the examples of the application as filed carried out with a combination of three plasticizers according to claim 2 of the main request and the passage at page 5, line 17 to page 6, line 2 of the application as filed , which explicitly contemplates a composition consisting of three plasticizers according to claim 2.

c) Regarding the amendment "wherein R_1 to R_3 ..., and an isodecyl group", it is correct that original claim 6 does not provide a valid support for this amendment since said claim 6 is only dependent on original claim 1 (and not on original claim 3). However, the subject-matter of original claim 6 is also disclosed in a general manner on page 10, lines 11-15 of the application as filed. Considering the general character of this disclosure, the Board is satisfied that said passage would apply to any embodiment of the application as filed, in particular to the one according to claim 3 thereof. Therefore, the amendment of claim 2 of the main request "wherein R_1 to R_3 ..., and an isodecyl group" constitutes a mere limitation of

the definition of groups R_1 to R_3 specified in claim 3 of the application as filed (dependent on claim 1) in the light of the passage at page 10, lines 11-15 of the application as filed. For these reasons, the Board is satisfied that this amendment is directly and unambiguously derivable from the application as filed.

Claims 6 and 7 - No epoxidized oil

3.2.4 The appellant contended that claim 6 of the main request infringed Article 123(2) EPC because the amendment related to a resin composition as defined therein that "does not contain an epoxidized oil" found no valid support in the application as filed.

a) In this respect, the main support for claim 6 of the main request is claim 8 of the application as filed. In addition, the Board shares the view of the respondent that it is directly and unambiguously derivable from the passage at page 7, lines 7-14 of the application as filed that the whole resin composition according to the invention should preferably not contain any epoxidized oil. This is further confirmed by the examples of the application as filed, in which the absence of epoxidized oil is examined and found to be beneficial, as put forward by the respondent (rejoinder: middle of page 7). In view of these disclosures, the Board considers that the application as filed discloses in a direct and unambiguous manner that resin compositions according to the invention, including the ones of claim 8 of the application as filed, should not contain any epoxidized oil. In that regard, the fact that the passage at page 7, lines 7-14 does not specify the amounts of resin and plasticizer composition according to claims 6 and 7 of the main request is not relevant since these features are explicitly disclosed in

claims 8 and 9 (dependent on claim 8) of the application as filed, which constitute the main support for claims 6 and 7 of the main request. Also, this preliminary conclusion is valid for the subject-matter of claim 6 of the main request when read in combination with operative claim 1 (and 2), i.e. also taking into accounts the remaining amendments made. Therefore, the appellant's objections in that respect are not persuasive (appellant's letter of 26 September 2023: page 5, second and third paragraphs).

b) The appellant put forward that neither the passage at page 7, lines 7-14, nor the examples of the application as filed constituted a valid support for the amendment directed to a resin composition comprising no epoxidized oil because these passages were only directed to the plasticizer composition and not to the whole resin composition (letter of 3 February 2025: middle of page 2 to top of page 3).

However, although it is correct that the first sentence of the passage at page 7, lines 7-14 and the examples of the application as filed are directed to the plasticizer composition *per se* (and not to the whole resin composition), it is indicated in the second sentence of the passage on page 7, lines 10-14 that when the epoxidized oil is not included, the resin shows improved properties. In these circumstances, the Board considers that it is derivable from this passage as a whole that the application encompasses embodiments directed to resin compositions that do not contain any epoxidized oil. As put forward by the respondent, it would not make sense to develop a plasticizer composition containing no epoxidized oil, if the latter were to be incorporated in the resin composition in a different manner (letter of 4 January 2024: bottom of

page 2 to top of page 3). In this regard, the Board further shares the respondent's view that the same conclusion is to be reached in view of the passages on page 6, lines 10-18 and page 6, line 23 to page 7, line 6 of the application as filed, which disclose that the presence of epoxidized oil in the resin composition may lead to disadvantages. Also, the same considerations are valid in respect of the examples of the application as filed. For these reasons, the appellant's argument is rejected.

c) At the oral proceedings before the Board, the appellant argued that the indication on page 6, lines 13-18 of the application as filed "epoxidized oil may be contained in the resin composition at less than ... parts by weight of the plasticizer composition" allowed that a small amount of epoxidized oil be present in the resin composition. For that reason, according to the appellant, the application as filed failed to provide a valid support for a resin composition containing no epoxidized oil.

However, the Board considers that the wording mentioned by the appellant (in particular due to the use of "less than") effectively allows that the whole resin composition contains no epoxidized oil. In any case, this passage cannot exclude resin compositions comprising no epoxidised oil from the general teaching of the application as filed. With this in mind, the Board is further satisfied that, as outlined in the preceding paragraph, that passage of the application as filed together with the following passages on page 6, line 19 to page 7, line 14 provide a direct and unambiguous disclosure of (whole) resin compositions containing no epoxidized oil. For that reason, the

appellant's argument did not succeed.

3.3 In view of the above, the appellant's arguments (that the Board effectively considers in the appeal proceedings) do not justify that the Board overturns the findings of the opposition division regarding Article 123(2) EPC in respect of the operative main request.

4. Article 56 EPC

4.1 The appellant put forward objections of lack of inventive step taking either D2 or D7 as the closest prior art. Whereas it was common ground that D2 constituted a suitable document to be taken as the closest prior art (and the Board had not reason to be of a different opinion), the suitability of D7 for that purpose was disputed by the respondent. Therefore, the issue of inventive step starting from D2 is hereinafter dealt with first, whereby claims 1 and 2 of the main request are dealt with separately.

4.2 D2 as the closest prior art - claim 1

4.2.1 In the following, the features of claim 1 of the operative main request are identified as follows, in accordance with section 5.1.1 of the decision under appeal:

(a) A plasticizer composition, consisting of:

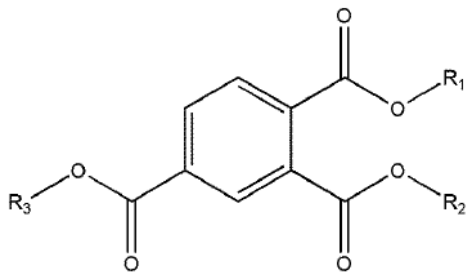
(b) a terephthalate-based plasticizer in which each of two alkyl groups bound to a diester group independently has 4 to 10 carbon atoms; and

(c) a trimellitate-based plasticizer represented by

Formula 1 below,

(d) wherein an epoxidized oil is not contained in the plasticizer:

[Formula 1]



in Formula 1, R_1 to R_3 are each independently an alkyl group having 4 to 10 carbon atoms,

(e) wherein the terephthalate-based plasticizer and the trimellitate-based plasticizer are included at a weight ratio of 90:10 to 10:90, and

(f) wherein R_1 to R_3 in Formula 1 are each independently selected from the group consisting of a normal hexyl group, a normal heptyl group, an isoheptyl group, an isooctyl group, a 2-ethylhexyl group, a normal nonyl group, an isononyl group, a 2-propylheptyl group, and an isodecyl group.

4.2.2 Distinguishing feature(s)

a) D2 (claim 1) discloses a composition comprising a polymer, diisononyl terephthalate with an average degree of branching of an isononyl group from 1.15 to 2.5 as a plasticizer and an additional plasticizer that reduces a processing temperature. The additional plasticizer is at least one plasticizer selected from a

list of components indicated in claim 6 or in paragraph 22 of D2, which includes among others a trialkyl trimellitate and an epoxidized oil. The trialkyl trimellitates preferably have from 4 to 8 carbon in the side chain (D2: paragraph 22, lines 22-23), whereby further information in that regard are provided in the second sentence of paragraph 24 of D2, which reads as follows:

"It is preferable that the said trialkyl trimellitate has ester side chains having from 4 to 8 carbon atoms, where the ester groups can either have the same number of carbon atoms or can differ from one another in their number of carbon atoms. At least one of the ester groups present particularly preferably is a group having at most 7 carbon atoms per ester group, and with particular preference is a group having at most 6 carbon atoms and very particularly preferably is a group having at most 5 carbon atoms."

In addition, various ranges of weight ratio diisononyl terephthalate:additional plasticizer are disclosed in paragraph 30 of D2, whereby these ranges vary from 1:20 to 20:1 (largest range) to 1:6 to 1:1 (smallest range).

b) The appellant disagreed with the conclusion reached in the decision under appeal (point 5.7.2.4), that the subject-matter of claim 1 of the operative main request differed from the disclosure of D2 in the specific range of weight ratio (feature (e) as indicated in point 4.2.1 above) and the specific definition of R_1 to R_3 (feature (f) as indicated in point 4.2.1 above). Rather, the appellant considered that the sole difference was that it was specified in claim 1 that specific hexyl/heptyl/octyl-isomers should be selected as group R_1 to R_3 (statement of grounds of appeal:

paragraph bridging pages 10 and 11).

c) However, the appellant's argument is not convincing for the following reasons: even if one were to consider the disclosure of paragraph 24 of D2 as amounting to the disclosure of a plasticizer composition consisting of a terephthalate-based plasticizer and a trimellitate-based plasticizer according to features (b) and (c) as defined in point 4.2.1 above, several choices have still to be made in the disclosure of paragraph 24 in order to arrive at the definition of groups R_1 to R_3 of claim 1 of the main request corresponding to feature (f) as defined in point 4.2.1 above. Indeed, paragraph 24 of D22 defines that the ester side chain (i.e. group R_1, R_2 or R_3 according to Formula 1 of operative claim 1) may be an alkyl group with 4 or 5 carbon atoms, which is excluded from the definition of R_1 to R_3 according to operative claim 1. Also, the generic disclosure of the alkyl group according to paragraph 24 of D2 does not anticipate the more specific isomer forms indicated in operative claim 1 for each of R_1 to R_3. In addition, whereas feature (f) as defined in point 4.2.1 above imposes a specific definition for each group R_1, R_2 and R_3, paragraph 24 of D2 only provides some requirements for "at least one" of these groups (and not mandatorily for the three groups). Finally, the Board considers that the combination of the most preferred weight ratio of 1:6 to 1:1 according to the more generic disclosure of paragraph 30 of D2 with a specific embodiment of the trialkyl trimellitate according to paragraph 24 of D2 (e.g. each of the alkyl group being C6 to C8), which would be necessary in order to arrive at a disclosure contemplated by the appellant (statement of grounds of appeal: page 10, last full paragraph and paragraph bridging pages 10 and 11) is, in the absence of any

pointer to this specific combination of features, not directly and unambiguously disclosed in D2.

d) In view of the above, the appellant's arguments provide no cause to deviate from the conclusion reached by the opposition division that the subject-matter of claim 1 of the main request differs from the disclosure of D2 in the specific range of weight ratio and the specific definition of R_1 to R_3 according to features (e) and (f) as defined in point 4.2.1 above.

4.2.3 Problem effectively solved over D2

a) It was in dispute between the parties how the problem effectively solved over the closest prior art is to be formulated. Whereas the appellant considered that in the absence of any effect shown over the closest prior art the problem solved over D2 could only reside in the provision of an alternative plasticizer composition (statement of grounds of appeal: page 11, first and second full paragraphs; letter of 26 September 2023: page 7, second full paragraph), the respondent argued that this problem resided in the provision of a plasticizer composition having overall improved properties with respect to hardness, tensile strength, elongation rate, low temperature resistance and volume resistance, which was considered to be demonstrated by the examples of the patent in suit and of D9 (rejoinder: page 9, last paragraph to page 10, second full paragraph).

b) In that respect, the Board agrees with the appellant that there is no evidence on file (in particular in view of the examples of the patent in suit and D9) illustrating a direct comparison between the generic definition of groups R_1 to R_3 according to paragraph 24

of D2 with the more specific definition thereof in claim 1 of the main request. In particular there is no evidence on file showing that a plasticizer composition according to claim 1 of the main request exhibits the improvements mentioned by the respondent as compared to a plasticizer composition according to paragraph 24 of D2 whereby the alkyl groups are not the ones specified for R_1 to R_3 in claim 1 of the main request. Indeed, among the examples of table 1 of the patent in suit that are directed to two-components plasticizer compositions consisting of a terephthalate-based plasticizer ("Plasticiser A") and a trimellitate-based plasticizer ("Plasticiser B"), only example 1-3 illustrates the subject-matter of claim 1 of the main request with a diisononyl terephthalate, whereby the latter is a the chemical component that corresponds to the main (i.e. mandatory) plasticizer according to D2 (see claim 1). However, there is no information on file regarding the average degree of branching of the diisononyl terephthalate used in example 1-3 of the patent in suit (which should be from 1.15 to 2.5 according to claim 1 of D2) and none of the other examples of the patent in suit differ from said example 1-3 in the nature of the rests of the trimellitate-based plasticizer (see distinguishing features indicated above). Therefore, it cannot be concluded that the nature of the rests R_1 to R_3 of the trimellitate-based plasticizer according to claim 1 of the main request leads to any improvement, contrary to the respondent's view.

c) The respondent indicated that they agreed with the reasoning of the opposition division regarding inventive step in view of D2 (rejoinder: section 5.1, second sentence), which means that they considered that the data of tables 1 to 5 of the patent in suit showed

"that the addition of specific trimellitate-based plasticizers improved overall the properties of the plasticizer composition with respect to hardness, tensile strength, elongation rate and low temperature resistance" (point 5.7.3.1 of the reasons, last bullet point). However, apart from the mere general reference to "tables 1-5" no detail is provided in the decision under appeal regarding the basis on which this conclusion was drawn. In that regard, as indicated in the preceding section, the Board considers that the examples of the patent in suit do not allow any fair comparison between the subject-matter of claim 1 of the main request and the disclosure of D2 considered to constitute the closest prior art. Under these circumstances, there is no reason for the Board to adhere to the conclusion reached by the opposition division and taken up by the respondent.

d) However, in view of examples 1-1 to 1-6, 1-8 and 1-9 according to tables 1 and 3 of the patent in suit, the Board is satisfied that it was shown that plasticizer compositions according to claim 1 of the main request lead to good mechanical properties, which is also an aim of D2 (paragraph 9: "moulding with good performance characteristics"; paragraphs 51-52; examples).

e) In addition, considering the last column of table 3 of the patent in suit and the table on page 2 of D9 (two components compositions according to examples 1-1 to 1-6, 1-8 and 1-9), the Board considers that it was also shown that compositions according to operative claim 1 further exhibit good low temperature resistance and good electrical resistance. In this regard, it is pointed out that, in the absence of a fair comparison, no improvement in terms of these two properties can be acknowledged, contrary to the respondent's view (see

respondent's letter of 16 January 2025: page 2, first to third paragraphs). The Board is nevertheless satisfied that the evidence on file at least shows that a level of these properties is achieved that renders these compositions suitable for use as insulation of electrical wires, as put forward by the respondent (respondent's letter of 16 January 2025: paragraph bridging pages 3 and 4).

f) At the oral proceedings before the Board, the appellant argued that the effects of low temperature resistance and electrical resistance relied upon by the respondent in view of the data of table 3 of the patent in suit and in the table of D9 had only been shown for very few components, used in very specific amounts. According to the appellant, it was not credible that these effects would be achieved over the whole scope of the claims. Therefore, these effects should not be considered in the formulation of the problem effectively solved over D2, so the appellant.

However, considering that the compositions according to operative claim 1 shown in table 3 of the patent in suit and in the table of D9 were shown to demonstrate the effects relied upon by the respondent, it would have been the duty of the appellant to provide evidence to the contrary in order to refute the presumption created by the patent in suit and D9, e.g. by showing that said effects were effectively not achieved over the whole scope of claim 1 of the main request. In the absence of such evidence, the appellant's argument cannot succeed.

g) In view of the above, the problem effectively solved over the closest prior art considered by the appellant (namely the disclosure of paragraph 24 of D2 amounting

to a plasticizer composition consisting of a terephthalate-based plasticizer and a trimellitate-based plasticizer, both according to the teaching of D2) resides in the provision of a plasticizer composition which leads to good mechanical properties, good low temperature resistance and good electrical resistance for cable insulation.

4.2.4 Obviousness

a) The question to be answered is whether the skilled person desiring to solve the problem identified as indicated above, would, in view of the closest prior art, possibly in combination with other prior art or with common general knowledge, have modified the disclosure of the closest prior art in such a way as to arrive at the claimed subject matter.

b) In that respect, as pointed out by the respondent, D2 deals with different properties and uses, namely it is related to a reduction of processing temperature which leads to improved thermal stability, in particular at elevated temperatures, in the technical field of e.g. floor or wall coverings (letter of 16 January 2025: paragraph bridging pages 3 and 4; see also D2: end of claim 1 and claims 10 to 16; paragraphs 1, 9, 10 - last sentence -, 12 - last sentence -, 14; similar arguments were also put forward during the oral proceedings before the Board). In particular, D2 contains no information regarding low temperature resistance, electrical resistance or the use of the compositions disclosed therein as cable insulation. In these circumstances, D2 alone cannot contain any motivation to solve the problem posed by modifying the relevant disclosure thereof considered as the closest prior art (namely the disclosure of

paragraph 24 of D2 amounting to a plasticizer composition consisting of a terephthalate-based plasticizer and a trimellitate-based plasticizer, both according to the teaching of D2) so as to arrive at the subject-matter of claim 1 of the main request.

c) The appellant's objection was further based on the combination of D2 with D7 (statement of grounds of appeal: bottom of page 11 to top of page 12; letter of 26 September 2023: bottom of page 7 to middle of page 8; oral proceedings before the Board).

c1) However, as indicated in the Board's communication (point 9.2.4), the two documents are directed to different plasticizers as main component (diisononyl terephthalate in D2; di(2-ethylhexyl) terephthalate in D7), whereby the two plasticizers are prepared with very specific, but different, methods (degree of branching in D2: see paragraph 41; impurity levels in D7: see paragraphs 82-85). It is further derivable from each of these documents that these specific preparation methods lead to the advantageous properties reported therein (D2: paragraphs 13, 14; D7: paragraphs 9, 97). In view of these differences in disclosures, the Board considers that it cannot be held that any information derivable from D7 would mandatorily be also valid for the disclosure of D2 and vice-versa. Therefore, for this reason alone, the combination of these documents is not obvious.

c2) In addition, the compositions according to D7 are disclosed to be suitably used in a very wide range of applications (paragraphs 66 and 73 to 80), whereby wire sheathing is only mentioned among other alternatives in paragraph 73 (seventh line) thereof. Also, as pointed out by the respondent (letter of 16 January 2025:

page 5, second paragraph of section 2/claim 1) the aim of the main plasticizer of D7 (namely di(2-ethylhexyl) terephthalate as defined in claim 1 thereof) is to improve the volatility and fogging properties (D7: paragraphs 9, 28 and 65) or to improve the gelling property of additional, optional plasticizers, if present (D7: paragraph 29). In this regard, although low temperature resistance is also assessed in table 2 of D7 (as acknowledged by the respondent on page 5 of their letter of 16 January 2025, third to sixth paragraphs of section 2/claim 1; the "Brittleness" parameter mentioned in table 2 and in paragraph 116 of D7 is an indication of low temperature resistance in the sense of the patent in suit), this is only done in relation to the main plasticizer of D7 alone, not to a combination of this main plasticizer with another - optional - plasticizer, let alone with a trimellitate-based plasticizer. In these circumstances, the Board shares the view of the respondent that D7 does not provide any information regarding the low temperature resistance of any combination of plasticizers disclosed therein and, for that reason also, cannot give a hint as to how to solve the problem posed, in particular a hint to the specific combination of a terephthalate-based plasticizer with a trimellitate-based plasticizer as defined in operative claim 1.

c3) For these reasons, the appellant's arguments based on the combination of D2 with D7 did not convince.

c4) During the oral proceedings before the Board, both parties further considered the disclosure of D6 in complement to the one of D7. The parties considered that D6 constituted common general knowledge and made reference to sections 28.4 and 28.6 on pages 492-493 of D6, that are related to the use as plasticizers of

phthalate esters and trimellitate esters, respectively.

However, each of sections 28.4 and 28.6 of D6 is directed to a single class of plasticizers, either phthalate esters or trimellitate esters but says nothing regarding the properties or suitable uses of combinations of plasticizers. In addition, while D6 discloses improved low temperature flexibility, as mentioned by the appellant, this is only the case in respect of phthalate esters (D6: section 28.4, paragraph bridging pages 492 and 493), which is the class of plasticizer that is mandatory present in the compositions according to D2 or D7 (diisononyl terephthalate according to claim 1 of D2 and di(2-ethylhexyl) terephthalate according to claim 1 of D7 are both phthalate esters). Therefore, this passage of D6 does not provide any motivation to solve the problem posed by combining a terephthalate-based plasticizer (which is already present in the relevant compositions of the closest prior art D2) with a trimellitate-based plasticizer, i.e. it does not provide any hint to modify the composition of the closest prior art so as to arrive at the subject-matter according to claim 1 of the main request. In these circumstances, also the argument of the appellant relying on the additional disclosure of D6 is not persuasive.

4.2.5 For these reasons, the subject-matter of claim 1 of the main request involves an inventive step when document D2 is taken as the closest prior art.

4.3 D2 as the closest prior art - claim 2

4.3.1 The subject-matter of claim 2 of the main request differs from the one of claim 1 thereof in that the plasticizer composition consists of three plasticizers,

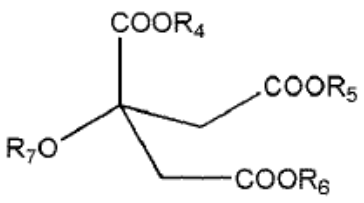
namely the same ones as the ones of claim 1 and an additional citrate-based plasticizer according to formula 2.

Distinguishing features

4.3.2 Regarding the identification of the features distinguishing the subject-matter of operative claim 2 over D2, the list of additional plasticizers according to D2 contains citric esters as an alternative (D2: claim 6; sentence bridging pages 2 and 3 and paragraph 29), including but not limited to embodiments that may be according to formula 2 of operative claim 2 (according to paragraph 29 of D2, the OH group may be free - i.e. R_7 = H according to formula 2 - or carboxylated - i.e. R_7 is not H -; also the alkyl groups may be in C1 to C4). Under these circumstances and following the same line as in section 4.2.1 above, the Board agrees with the opposition division that the subject-matter of claim 2 of the main request differs from the disclosure of D2 in features (e) and (f) as identified in section 4.2.1 above and additionally in feature (k) as defined in point 5.1.2 of the reasons of the decision under appeal (see point 5.7.2.4 of the reasons), which reads as follows:

(k) and a citrate-based plasticizer represented by Formula 2 below:

[Formula 2]



in Formula 2, R_4 to R_6 are each independently an alkyl group having 5 to 9 carbon atoms, and R_7 is hydrogen.

Objective problem and obviousness of the solution

4.3.3 Regarding the formulation of the problem effectively solved over D2, the Board considers that, similarly to what is indicated above for claim 1 of the main request, neither the patent in suit, nor D9 contain any comparison that shows that this additional distinguishing feature (k) has any impact (let alone any improvement) on the properties of the plasticizer compositions as compared to the ones considered for claim 1 of the main request. In particular, in table 2 of the patent in suit, examples 2-5 and 2-6 and comparative example 2-2 are the sole examples carried out with a diisononyl phthalate and a citric-based plasticizer according to formula 2. However, a trimellitate-based plasticizer in C4 and C5, which is not according to claim 2 of the main request, was used in examples 2-5 and 2-6 and no further fair comparison of any of these examples with any other examples can be made (in view of the different nature of plasticizers and/or amounts thereof used). Nevertheless, it was also not shown that this additional distinguishing feature (k) provided any reasons to deviate from the formulation of the problem solved retained for operative claim 1 (see in particular point 4.2.3.f above). In these circumstances, in accordance with the respondent's view (letter of 16 January 2025: page 5, second to fifth lines)), there is no reason for the Board to consider a different formulation of the problem effectively solved over D2 for operative claim 2 as compared to operative claim 1.

4.3.4 In addition, since it is concluded above that the subject-matter of operative claim 1 is not obvious over D2, optionally in combination with D7, even when taking into account the disclosure of D6, the same conclusion is also valid - for the same reasons - for the subject-matter of operative claim 2.

4.3.5 For these reasons, the subject-matter of claim 2 of the main request involves an inventive step when document D2 is taken as the closest prior art.

4.4 D7 as the closest prior art - claims 1 and 2

4.4.1 The respondent put forward that D7 was not a document that could be suitably taken as the closest prior art (rejoinder: paragraph bridging pages 11 and 12).

However, considering that D7 is related to improved plasticizer compositions for polymer compositions such as PVC and having good mechanical properties (paragraphs 6, 10 and 73-80; table 2), D7 cannot be held to be so irrelevant that it would not be considered as a suitable starting point for the analysis of inventive step. The fact that another document such as D2 may constitute another suitable document to be taken as the closest prior art is not a valid reason for disregarding D7. Indeed, according to established case law, if various documents may be contemplated as closest prior art, the presence of an inventive step should be assessed in view of each of these documents. For that reason, the respondent's argument is rejected.

Distinguishing features - claims 1 and 2

4.4.2 D7 discloses a plasticizer composition comprising di(2-ethylhexyl)terephthalate with some specific requirements regarding amounts of specific impurities (claims 1 to 4). The plasticizer composition can (optionally) further comprise at least one or more additional plasticiser(s) selected from a list of alternatives comprising among others trimellitic acid trialkyl esters, citric acid esters and epoxidized oil (D7: claim 8; paragraph 29; paragraph 31, lines 10-11; page 4, left hand side column, lines 5-7, 31-36, 39-47). Specific amounts of the plasticizers are mentioned in paragraphs 44 and 62-63. Under these circumstances, the features distinguishing the subject-matter of claims 1 and 2 of the main request from the relevant disclosure of D7 are the same as the ones identified in points 4.2.2 and 4.3.2 above (in respect of D2). This view was communicated to the parties in the Board's communication (points 9.4.3 and 9.4.4) and remained undisputed.

Problem effectively solved over D7

4.4.3 Regarding the formulation of the problem effectively solved over D7, the parties arguments were very similar to the ones put forward in respect of D2 as the closest prior art.

Claim 1

a) In this regard, table 1 of the patent in suit contains examples directed to plasticizer compositions according to operative claim 1 (examples 1-2 to 1-5, 1-8 and 1-9) as well as plasticizer compositions consisting of a terephthalate-based plasticizer

("Plasticiser A") being di(ethylhexyl)terephthalate which is the main (mandatory) plasticizer according to D7 (claim 1) with a trimellitate-based plasticizer ("Plasticiser B") according to the general disclosure of D7 (claim 8, eight and ninth lines and corresponding passage of paragraph 29), see examples 1-1 and 1-2 of table 1 of the patent in suit. However, there is no information on file showing that the di(ethylhexyl)terephthalate used in the examples of the patent in suit is "substantially free of a di-ester according to formula I" according to claim 1 of D7 and no fair comparison can be made between said examples 1-1 and 1-2 of table 1 of the patent in suit and any other examples of the patent in suit (considering the different nature of plasticizers and/ of amounts thereof used). Therefore, it cannot be concluded that the nature of the rests R_1 to R_3 of the trimellitate-based plasticizer according to claim 1 of the main request leads to any improvement over D7, contrary to the respondent's view.

b) However, in view of examples 1-1 to 1-6, 1-8 and 1-9 according to tables 1 and 3 of the patent in suit, the Board is satisfied that it was shown that plasticizer compositions according to claim 1 of the main request lead to good mechanical properties, which is also an aim of D7 (table 2 and paragraph 116). In addition, considering the last column of table 5 of the patent in suit and the table on page 2 of D9 (two components compositions according to examples 1-1 to 1-6, 1-8 and 1-9), the Board considers that it was further shown that compositions according to operative claim 1 also exhibit good low temperature resistance and good electrical resistance. In this regard, it is pointed out that, in the absence of a fair comparison, no improvement in terms of these two properties can be

acknowledged, contrary to the respondent's view (see respondent's letter of 16 January 2025: page 6, second paragraph mentioning an "improvement"). The Board is nevertheless satisfied that the evidence on file at least show that a level of these properties is achieved that renders these compositions suitable for use as insulation of electrical wires, as put forward by the respondent (respondent's letter of 16 January 2025: paragraph bridging pages 3 and 4).

f) In addition, the appellant's argument that the effects of low temperature resistance and electrical resistance relied upon by the respondent were not credible over the whole scope of the claims must be rejected as indicated in section 4.2.3.f above.

Claim 2

g) Regarding the formulation of the problem effectively solved over D7 by operative claim 2, the Board considers that, similarly to what is indicated above for claim 1 of the main request, neither the patent in suit, nor D9 contains any comparison that shows that the additional distinguishing feature (k) has any impact (let alone any improvement) on the properties of the plasticizer compositions as compared to the ones considered for claim 1 of the main request. In particular, in table 2 of the patent in suit, examples 2-1 to 2-4 and comparative example 2-4 are the sole examples directed to a plasticizer composition consisting of di(2-ethylhexyl)terephthalate together with a trimellitate-based plasticizer and a citric-based plasticizer according to operative claim 2. However, no fair comparison of these examples can be made with any other examples of the patent in suit in order to show that that the nature of the rests R_1 to

R_3 of the trimellitate-based plasticizer according to claim 1 of the main request leads to any improvement over D7. Nevertheless, it was also not shown that the additional distinguishing feature (k) provided any reasons to deviate from the formulation of the problem solved retained for operative claim 1. In these circumstances, there is no reason for the Board to consider a different formulation of the problem effectively solved over D7 for operative claim 2 as compared to operative claim 1.

Objective problem - claims 1 and 2

h) In view of the above, the problem effectively solved by claims 1 and 2 of the main request over the relevant disclosure of D7 taken as the closest prior art considered by the appellant is the same as the one considered above when taking D2 as the closest prior art, i.e. it resides in the provision of a plasticizer composition which leads to good mechanical properties, good low temperature resistance and good electrical resistance for cable insulation.

Obviousness

4.4.4 Regarding the obviousness of the solution, the Board considers that for the reasons already indicated in section 4.2.4.c1 above, the disclosure of D7 alone does not render obvious the subject-matter of claims 1 or 2 of the main request (the main plasticizer of D7 is used to achieve different properties than the ones aimed at in the patent in suit; in addition, D7 provides no hint to combine this main plasticizer with a trimellitate-based plasticizer and optionally a citrate-based plasticizer as defined in claims 1 and 2 of the main request in order to solve the problem posed).

In addition, regarding the combination of D7 with D2 that was contemplated by the appellant, the same considerations as the ones indicated in section 4.2.4.c2 above are valid (incompatibility of the teachings of D7 and D2 in view of the different nature of the respective main plasticizer; the disclosure of D2 does not add anything as compared to the one of D7 regarding the specific combination of plasticizers necessary in order to arrive at the subject-matter being claimed).

Also, for the reasons already indicated in section 4.2.4.c4 above, the disclosure of D6 does not provide any motivation to solve the problem posed by combining a terephthalate-based plasticizer with a trimellitate-based plasticizer (for operative claims 1 and 2), optionally a citrate-based plasticizer (for operative claim 2). In these circumstances, also the argument of the appellant based on the disclosure of D6 is not persuasive for any of claims 1 and 2 of the main request.

4.4.5 For these reasons, the subject-matter of claims 1 and 2 of the main request involves an inventive step when document D7 is taken as the closest prior art.

4.5 Although objections of lack of inventive step when taking documents D2 and D7 had been put forward in writing against other claims of the main request (see e.g. pages 14 to 16 of the statement of grounds of appeal), they were not pursued at the oral proceedings before the Board once an inventive step had been acknowledged for operative claims 1 and 2.

5. In view of the above, the objections raised by the appellant against the claims of the main request were either not admitted or not successful. Therefore, the appeal is to be dismissed.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

D. Hampe D. Semino

Decision electronically authenticated