Patent Right	Date	February 18, 2021	Court	Tokyo District Court, 47th Civil Division
	Case number	2019 (Wa) 11721		
- A case in which the court rejected a defense of patent invalidity alleged by the Defendant and upheld the claim for an injunction against the manufacture, transfer, etc. of the Defendant's Product and the claim for the disposal of the Defendant's Product based on a patent right.				

Summary of the Judgment

In this case, the Plaintiff, the holder of the patent right of the patent for an invention of a flame-retardant composition (the "Invention"), alleges that the production, use, transfer, etc. of the Defendant's Product constitute infringement of the aforementioned patent right and claims an injunction against the aforementioned acts of infringement committed by the Defendant and the disposal of the Defendant's Product, etc.

In this case, the parties do not dispute the fact that the Defendant's Product falls within the technical scope of the Invention. The major issues of this case are [i] whether the Defendant infringes or is likely to infringe the patent right (Issue 1) and [ii] whether a defense of patent invalidity is established (Issue 2; incidentally, the Defendant alleges five grounds for invalidation, including violation of the clarity requirement (Issue 2-1), violation of the support requirement (Issue 2-2), and lack of novelty and lack of an inventive step (Issue 2-3)). Regarding Issue 1, the Defendant posted the Defendant's Product on its website as the "line of goods" and thereby offered to transfer it, and even after the present lawsuit was filed the Defendant has continued to post the Defendant's Product on the same website up to the present date. Therefore, the court held that the Defendant infringes or is likely to infringe the patent right. Regarding Issue 2, out of the grounds for invalidation alleged by the Defendant, neither of the violations of a description requirement (violation of the clarity requirement and violation of the support requirement) was found in light of the statement of the claims and the statements in the description. In addition, regarding the ground for invalidation of lack of novelty and lack of an inventive step, the court held that there is a difference between the Invention and the cited invention and that it is not found that a person skilled in the art could have easily conceived of that difference, and upheld both the claim for an injunction against the aforementioned acts of infringement and the claim for the disposal of the Defendant's Product based on the aforementioned patent right.

Judgment rendered on February 18, 2021
Original received on the same date by the court clerk
2019 (Wa) 11721 Case of seeking injunction against patent infringement
Date of conclusion of oral argument: November 9, 2020

Judgment

Plaintiff: Clariant Produkte (Deutschland) Gesellschaft mit beschränkter Haftung

Defendant: Phos-Tec Co., Ltd.

Main text

1. The Defendant must neither manufacture, transfer, import, export, offer to transfer nor display for the purpose of transferring the product stated in the List of the Defendant's Product attached to this judgment.
2. The Defendant shall dispose of the product referred to in the preceding paragraph and the half-finished product thereof.
3. The Defendant shall bear the court costs.
4. This judgment may be provisionally executed only in relation to paragraph 1.

Facts and reasons

No. 1 Claims

Same as the main text.

No. 2 Outline of the case

The Plaintiff is the patentee of a patent for an invention titled "Dialkyl phosphinates." The Plaintiff alleges that the product stated in the List of the Defendant's Product attached to this judgment (hereinafter referred to as the "Defendant's Product") falls within the technical scope of the patented invention pertaining to the aforementioned patent.

In this case, the Plaintiff alleges that the manufacture, transfer, etc. of the Defendant's Product by the Defendant constitutes infringement of the aforementioned patent right and claims an injunction against the Defendant's manufacture, transfer, etc. of the Defendant's Product under Article 100, paragraph (1) of the Patent Act, and also claims the disposal of the Defendant's Product and the half-finished product thereof (object that has the structure of the Defendant's Product but has yet to be completed as a product; the same applies hereinafter) under paragraph (2) of the same Article.

1. Basic facts (the parties do not dispute facts other than those for which evidence, etc. is cited; incidentally, evidence for which branch numbers are omitted includes all articles of evidence with these branch numbers (the same applies hereinafter))

(1) The Patent

The Plaintiff is the patentee of a patent for an invention titled "Dialkyl phosphinates" (Patent No. 4870924; the number of claims is 30; hereinafter this patent is referred to as the "Patent"). The Plaintiff filed a patent application for the Patent on December 17, 2004 (priority claim: December 19, 2003, Federal Republic of Germany; hereinafter the filing date in the same country that serves as the basis for a priority claim is referred to as the "priority date"), and received the registration of establishment of the patent right on November 25, 2011.

(2) The Inventions

The statements of Claims 1 to 30 in the claims pertaining to the Patent are as stated in the relevant part of the patent gazette attached to this judgment (hereinafter the statements of Claims 1 to 4 are referred to as the "Claims" and the inventions pertaining thereto are referred to as the "Inventions"; incidentally, each of those inventions is referred to as "Invention 1" to "Invention 4," respectively; in addition, the description (including drawings) thereof is referred to as the "Description," and statements in the relevant part of the Description are sometimes referred to as [0001], etc.).

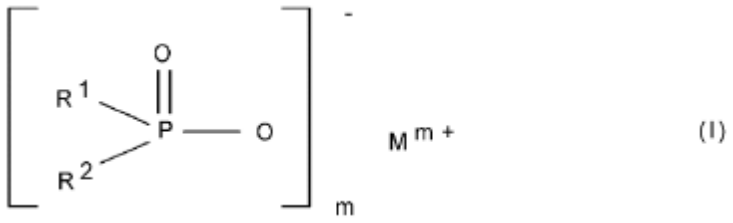
(3) Segmentation into constituent features

Inventions 1 to 4 are segmented into the following constituent features (hereinafter each of the constituent features is referred to as "Constituent Feature A," etc. according to the reference letter attached thereto).

A. Invention 1

[A] Formula (I)

[Chemical Formula 1]



(I)

[B] [Wherein R^1 and R^2 are the same as or different from each other and are linear or branched C_1- to C_6- alkyl;

[C] M is a Mg, Ca, Al, Sb, Sn, Ge, Ti, Fe, Zr, Zn, Ce, Bi, Sr, Mn, Li, Na, K and/or a protonated nitrogen base;

[D] m is 1 to 4.]
[H] A flame-retardant composition comprising at least one kind of dialkyl phosphinate
[E] which is expressed by the above formula wherein
[F] the telomer content is 0.01 to 6% by weight
[G] and said telomers are ethyl butylphosphinate, butyl butylphosphinate, ethyl hexylphosphinate, butyl hexylphosphinate and/or hexyl hexylphosphinate.
B. Invention 2
[I] A flame-retardant composition stated in Claim 1 wherein the telomer content is 0.1 to 5% by weight.
C. Invention 3
[J] A flame-retardant composition stated in Claim 1 or 2 wherein the telomer content is 0.2 to 2.5% by weight.
D. Invention 4
[K] A flame-retardant composition stated in any of Claims 1 to 3 wherein M is aluminum, calcium, titanium, zinc, tin or zirconium.
E. Concerning a change in the segmentation of Invention 1

In the present lawsuit (the "Lawsuit"), the Plaintiff initially segmented Claim 1 as follows in relation to Constituent Features [G] and [H]. However, the Plaintiff subsequently changed the segmentation as mentioned in A. above by transferring the phrase "comprising at least one kind of dialkyl phosphinate" in Constituent Feature [G] to Constituent Feature [H] (hereinafter this change is referred to as the "Change of Segmentation").

(Initial segmentation in relation to Constituent Features [G] and [H])
[H] A flame-retardant composition
[G] comprising at least one kind of dialkyl phosphinate wherein said telomers are ethyl butylphosphinate, butyl butylphosphinate, ethyl hexylphosphinate, butyl hexylphosphinate and/or hexyl hexylphosphinate.

(4) The Defendant's act, etc.

Around May 2018, in the course of trade, the Defendant imported the Defendant's Product and provided it to the Defendant's customers as a sample for the purpose of transferring it (Exhibit Ko 3; entire import of oral arguments)

Incidentally, the parties do not dispute the fact that the Defendant's Product falls within the technical scope of the Inventions (incidentally, based on the Evidence, the Defendant's Product is also found to fall within the technical scope of the Inventions).

2. Issues

(1) Whether the Defendant infringes or is likely to infringe the patent right (Issue 1)

(2) Whether the Patent should be invalidated by a trial for patent invalidation (Issue 2)
A. Whether Ground for Invalidation 1 (violation of the clarity requirement) exists (Issue 2-1)
B. Whether Ground for Invalidation 2 (violation of the support requirement) exists (Issue 2-2)
C. Whether Ground for Invalidation 3 (lack of novelty and lack of an inventive step based on Exhibit Otsu 3) exists (Issue 2-3)
D. Whether Ground for Invalidation 4 (new violation of a description requirement associated with the Change of Segmentation) exists (Issue 2-4)
E. Whether Ground for Invalidation 5 (lack of novelty and lack of an inventive step that newly arose in association with the Change of Segmentation) exists (Issue 2-5)

(omitted)

No. 3 Judgment of this Court
1. Concerning Issue 1 (whether the Defendant infringes or is likely to infringe the patent right)

As mentioned in No. 2, 1.(4) above, the parties do not dispute the fact that the Defendant's Product is included in the technical scope of the Inventions. However, despite that, the Defendant is found to have been importing the Defendant's Product and providing it as a sample for the purpose of transferring it in the course of trade since May 2018. According to evidence (Exhibit Ko 3) and the entire import of oral arguments, the Defendant posts the Defendant's Product as the "line of goods" on its website to offer to transfer it. It is found that even after the Lawsuit was filed the Defendant has not deleted the Defendant's Product from the line of products posted on the same website and has continued to post the Defendant's Product thereon up to the present date by alleging that there is no need to delete the Defendant's Product as the Defendant's Product does not infringe the patent right.

In light of these facts, it must be said that the Defendant, who handles the Defendant's Product in the course of trade and actually imports and provides it as a sample for the purpose of transferring it, infringes or is likely to infringe the patent right in relation to all circumstances involved in the process of procuring and distributing the Defendant's Product. The Defendant disputes the infringement or likelihood of infringement of the patent right. However, the Defendant's allegations are not acceptable in light of the aforementioned explanations.
2. Concerning Issue 2-1 (whether Ground for Invalidation 1 (violation of the clarity

requirement) exists)

(1) Regarding Ground for Invalidation 1 (violation of the clarity requirement), the Defendant alleges that [i] the technical meaning of "telomers" is unclear, that [ii] the meaning of the phrase "the telomer content is 0.01 to 6% by weight" is unclear, that [iii] the difference between the "dialkyl phosphinate expressed by Formula (I)" and "telomers" is unclear, and that [iv] the effect of the Invention is not exerted if residual acetate is included.

(2) Therefore, the aforementioned allegations [i] to [iii] are examined first.

A. The Description includes the following statements as the detailed explanation of the invention. (Exhibit Ko 2)

(A) Background of the invention

[0002] … the phosphinates of the prior art contain undesired telomer by-products which result from the use of organic solvents in the first process stage.

(B) Problem to be solved by the invention

[0003] … the problem to be solved by the present invention is to provide a dialkyl phosphinate of a certain metal, which has a particularly low residual solvent content, in particular, acetic acid content, and telomer product content.

(C) Means for solving the problem

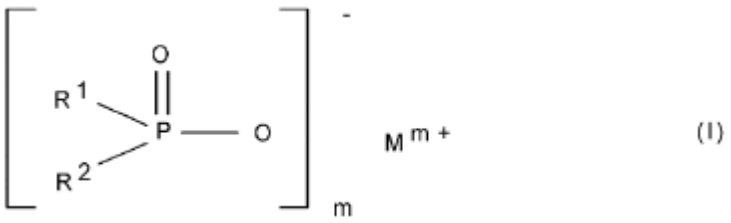
[0004] … the inventor found that a dialkyl phosphinate which has particularly low residual solvent (acetic acid) content and telomer product content causes a particularly low level of degradation of the surrounding synthetic resin (especially, polymer degradation) when it is mixed into synthetic resin.

[0005] … The degradation of the surrounding synthetic resin can be evaluated by the change in the relative viscosity (SV) of the polymer solution before and after processing. The higher the SV value, i.e., the closer to the value of the untreated polymer, the lower the level of polymer degradation during mixing of the flame retardant.

[0006] The degradation of the surrounding synthetic resin can also be evaluated by the melt volume index. Here, the viscosity of the polymer melt containing the additive in question is compared with the viscosity of untreated melts. The smaller the decrease in viscosity compared to untreated melts, the better.

[0007] Therefore, the present invention relates to the dialkyl phosphinate expressed by Formula (I)

[0008] [Chemical Formula 1]



(I)

[0009] [Wherein R^1 and R^2 are the same as or different from each other and are linear or branched C_1- to C_6- alkyl;
M is a Mg, Ca, Al, Sb, Sn, Ge, Ti, Fe, Zr, Zn, Ce, Bi, Sr, Mn, Li, Na, K and/or a protonated nitrogen base;
m is 1 to 4.]
which is characterized in that the telomer content is 0.01 to 6% by weight and that said telomers are ethyl butylphosphinate, butyl butylphosphinate, ethyl hexylphosphinate, butyl hexylphosphinate and/or hexyl hexylphosphinate.

[0015] The telomers are of the following group:
C_2-alkyl-C_4-alkylphosphinate, C_4-alkyl-C_4-alkylphosphinate, C_2-alkyl-C_6-alkylphosphinate, C_4-alkyl-C_6-alkylphosphinate, and C_6-alkyl-C_6-alkylphosphinate.

[0020] Furthermore, the present invention also relates to a flame-retardant composition comprising at least one kind of dialkyl phosphinate of the present invention.
B. In addition, according to evidence (Exhibit Ko 2 and Exhibits Otsu 3 and 8 to 10) and the entire import of oral arguments, it is found that a person skilled in the art can understand the following as common general technical knowledge: the term "telomers" mean low polymers; "ethyl butylphosphinate, butyl butylphosphinate, ethyl hexylphosphinate, butyl hexylphosphinate and/or hexyl hexylphosphinate" are all dialkyl phosphinates wherein the raw material, ethylene or propylene, has a telomerized butyl (two ethylene monomers are polymerized) or hexyl (three ethylene monomers (C_2) are polymerized or two propylene monomers (C_3) are polymerized).
C. Therefore, determinations are made below concerning the aforementioned arguments [i] to [iii] (whether statements about "telomers" are unclear, etc.) on the premise of A. and B. above.
(A) First, regarding the term "telomers" in the Claims, the issue is whether the phrase "comprising at least one kind of dialkyl phosphinate" is a statement about "telomers."

Although it is hard to say that this point is immediately clear based only on the statement of the Claims, regarding the phrase "comprising at least one kind of dialkyl phosphinate," the Description states as follows in [0020]: "… the present invention also relates to a flame-retardant composition comprising at least one kind of dialkyl phosphinate of the present invention." On the other hand, regarding "telomers," the

Description clearly states as follows in [0007] to [0009]: "… relates to the dialkyl phosphinate expressed by Formula (I) … which is characterized in that the telomer content is 0.01 to 6% by weight and that said telomers are ethyl butylphosphinate, butyl butylphosphinate, ethyl hexylphosphinate, butyl hexylphosphinate and/or hexyl hexylphosphinate." Furthermore, the Description also clearly states as follows in [0015]: "The telomers are of the following group: C_2-alkyl-C_4-alkylphosphinate, C_4-alkyl-C_4-alkylphosphinate, C_2-alkyl-C_6-alkylphosphinate, C_4-alkyl-C_6-alkylphosphinate, and C_6-alkyl-C_6-alkylphosphinate." There is no other statement indicating that the term "telomers" may include substances other than the compounds that belong to the aforementioned five groups (hereinafter those compounds are merely referred to as the "five compounds") in the Description.

In light of these, the phrase "comprising at least one kind of dialkyl phosphinate" in the Claims is not a statement about the "telomers," but can be considered to be a phrase stating that the "dialkyl phosphinate expressed by Formula (I)" "comprises at least one kind of dialkyl phosphinate." That is, the aforementioned phrase cannot be considered to be a phrase stating that "telomers" are those "comprising at least one kind of dialkyl phosphinate" which is any of the five compounds listed in the Claims.

In this manner, the Claims do not state "telomers" as those that can include substances other than the aforementioned five compounds, for example, by using a phrase that "telomers are those "comprising at least one kind of dialkyl phosphinate." The Description also defines "telomers" in a limited way as any of or combination of the aforementioned five compounds. In addition, there is no other statement indicating that "telomers" may include substances other than the aforementioned five compounds in the Description.

Therefore, it should be said that a person skilled in the art understands that the "telomers" stated in the Claims are limited to any of or combination of the listed five compounds (ethyl butylphosphinate, butyl butylphosphinate, ethyl hexylphosphinate, butyl hexylphosphinate and/or hexyl hexylphosphinate). It should be said that there is no unclear point in this regard.

(B) Moreover, as mentioned in B. above, it is found that a person skilled in the art understands the following as common general technical knowledge: the term "telomers" means low polymers; "ethyl butylphosphinate, butyl butylphosphinate, ethyl hexylphosphinate, butyl hexylphosphinate and/or hexyl hexylphosphinate" are all dialkyl phosphinates wherein the raw material, ethylene or propylene, has a telomerized butyl (two ethylene monomers are polymerized) or hexyl (three ethylene monomers (C_2) are polymerized or two propylene monomers (C_3) are polymerized). Therefore, it should be said that it is a technical matter which a person skilled in the art can easily understand

that all the aforementioned five compounds are called "telomers" for the aforementioned reason.

(C) For the reasons described above, as long as the "telomers" stated in the Claims are limited to any of or combination of the listed five compounds and the reason for calling the five compounds "telomers" should be considered as a technical matter that a person skilled in the art can easily understand, it cannot be said that the "telomer[s]" stated in the Claims are unclear.

Consequently, although the Defendant makes the aforementioned allegations [i] to [iii], the technical meaning of "telomers" mentioned in [i] is clear as mentioned above, and the phrase that specifies the content thereof, "the telomer content is 0.01 to 6% by weight," mentioned in [ii] can also be considered clear. Moreover, regarding [iii], the "telomers" in the Inventions are defined as "ethyl butylphosphinate... and/or hexyl hexylphosphinate," and it is clear that the term "telomers" means specific compounds out of the dialkyl phosphinates defined in Constituent Features [A] to [E] of the Inventions. Therefore, it cannot be said that the difference between the dialkyl phosphinates of Constituent Features [A] to [E] and "telomers" is unclear. In this manner, the aforementioned allegations of the Defendant are not acceptable.

(3) In addition, the Defendant makes the aforementioned allegation [iv] (the effect of the Invention is not exerted if residual acetate is included). However, even if a flame-retardant composition comprising residual acetate does not exert the effect of the Inventions, that fact does not immediately lead to the conclusion that the text of the Claims that does not include any statement about residual acetate is unclear. Therefore, the aforementioned allegation of the Defendant is not acceptable.

(4) For the reasons described above, none of the Defendant's allegations concerning Ground for Invalidation 1 (violation of the clarity requirement) is acceptable, and it is not found that the aforementioned ground for invalidation exists in relation to the Inventions.

3. Concerning Issue 2-2 (whether Ground for Invalidation 2 (violation of the support requirement) exists)

(1) Regarding Ground for Invalidation 2 (violation of the support requirement), the Defendant alleges that [i] regarding the "telomer content," only % by mol is stated, and the relationship between % by weight and % by mol is not stated, that [ii] the method of measuring the "telomer content" is not stated, and that [iii] only aluminum salt of diethylphosphinic acid and aluminum salt of ethyl butylphosphinic acid are disclosed.

(2) Therefore, first considering the aforementioned allegation [i], as mentioned in 2. (2) above, the "telomers" in the Inventions are limited to any of or combination of the specific five compounds, "ethyl butylphosphinate … hexyl hexylphosphinate," and are not the

low polymers of many monomers with different molecular weights. Therefore, the molecular weights of all the aforementioned five compounds are found to be clear. According to evidence (Exhibit Ko 24), it should be said that a person skilled in the art can easily convert % by mol to % by weight.

Therefore, it is not found that the Inventions wherein "the telomer content is 0.01 to 6% by weight" are not stated in the detailed explanation of the invention in the Description.

(3) Next, considering the aforementioned allegation [ii] (the method of measuring the "telomer content" is not stated), the telomers in the Inventions are dialkyl phosphinates, specifically, "ethyl butylphosphinate … and/or hexyl hexylphosphinate." It is found that phosphorus 31 nuclear magnetic resonance (^{31}P-NMR) spectroscopy, etc. were well-known among persons skilled in the art as the methods of measuring the contents of these dialkyl phospinates as of the priority date of the Patent (Exhibit Otsu 3, Exhibits Ko 18 to 20, and the entire import of oral arguments).

Consequently, it should be said that even if the method of measuring the content of "ethyl butylphosphinate … and/or hexyl hexylphosphinate" is not especially stated in the Description, a person skilled in the art can easily understand that it is only necessary to use the aforementioned well-known measurement methods.

Therefore, even if the method of measuring the telomer content is not stated in the detailed explanation of the invention in the Description, it is not found that the Inventions wherein "the telomer content is 0.01 to 6% by weight" are not stated in the detailed explanation of the invention.

(4) Furthermore, the aforementioned allegation [iii] (only aluminum salt of diethylphosphinic acid and aluminum salt of ethyl butylphosphinic acid are disclosed) is examined below.

A. The following is stated in [Detailed explanation of the invention] in the Description. (Exhibit Ko 2)

(A) UL94 classification

[0128] UL94 (Underwriters Laboratories): For test specimens consisting of each mixture, flame plasticization is measured by using 1.5 mm thick test specimens.

[0129] V-0: The time of afterburning is shorter than 10 seconds; the sum of the time of afterburning by application of flame 10 times is not more than 50 seconds; there is no burning droplet; the test specimens are not completely burnt off; the time of afterburning after the completion of application of flame is not more than 30 seconds, and therefore, the test specimens are not afterburnt.

[0130] V-1: The time of afterburning after the completion of application of flame is not more than 30 seconds; the sum of the time of afterburning after the completion of

application of flame is not more than 250 seconds; the time of afterburning of the test specimens after the completion of application of flame is not more than 60 seconds; and the same determination criteria as V-0 are used for other conditions.

[0131] V-2: The cotton indicator catches fire due to burning droplets, but the same determination criteria as V-1 are used for other conditions.

(B) Working examples

[0134] Example 1 (Comparative example): …

[0136] The composition of the product is as follows: / Aluminum diethylphosphinate: 87.2 mol% / Aluminum ethyl butylphosphinate: 11.9 mol% / Aluminum ethylphosphonate: 0.9 mol% / Acetate in the remaining amount: 0.88% by weight

Example 2 (Comparative example): …

[0137] The composition of the product is as follows: / Aluminum diethylphosphinate: 90.8 mol% / Aluminum ethyl butylphosphinate: 8.4 mol % / Aluminum ethylphosphonate: 0.8 mol % / Acetate in the remaining amount: 0.45% by weight

Example 3 (Working example) …

[0138] The composition of the product is as follows: Aluminum diethylphosphinate: 98.6 mol% / Aluminum ethyl butylphosphinate: 0.9 mol% / Aluminum ethylphosphonate: 0.5 mol% / Acetate in the remaining amount: 0% by weight

Example 4 (Working example): … The composition of the product is as follows: / Aluminum diethylphosphinate: 96.5 mol% / Aluminum ethyl butylphosphinate: 2.7 mol% / Aluminum ethylphosphonate: 0.8 mol% / Acetate in the remaining amount: 0% by weight

Example 5 (Working example): …

[0139] The composition of the product is as follows: / Aluminum diethylphosphinate: 93.9 mol% / Aluminum ethyl butylphosphinate: 5.5 mol% / Aluminum ethylphosphonate: 0.6 mol% / Acetate in the remaining amount: 0% by weight

[0140] Example 7: … polymer molded body is obtained by blending … 25% by weight of the product of Example 1 … The UL94 classification of the test specimen is V-2.

[0141] Example 8: A flame-retardant polymer molded body is obtained by blending … 25% by weight of the product of Example 2 … The UL94 classification of the test specimen is V-2.

[0142] Example 9 (Working example): A flame-retardant polymer molded body is obtained by blending … 25% by weight of the product of Example 3 … The UL94 classification of the test specimen is V-0.

[0143] Example 10 (Working example): A flame-retardant polymer molded body is

obtained by blending … 25% by weight of the product of Example 4 … The UL94 classification of the test specimen is V-0.

[0144] Example 11 (Working example): A flame-retardant polymer molded body is obtained by blending … 25% by weight of the product of Example 5 … The UL94 classification of the test specimen is V-0.

[0145] Example 12: A flame-retardant polymer molded body is obtained by blending … 12% by weight of the product of Example 1 … The UL94 classification of the test specimen is V-1.

[0146] Example 13: A flame-retardant polymer molded body is obtained by blending … 12% by weight of the product of Example 3 … The UL94 classification of the test specimen is V-0.

[0148] Example 15 (Comparative example): A flame-retardant polymer molded body is obtained by blending … 11.4% by weight of the product of Example 1 … The UL94 classification of the test specimen is V-2.

[0149] Example 16: A flame-retardant polymer molded body is obtained by blending … 11.4% by weight of the product of Example 3 … The UL94 classification of the test specimen is V-0.

[0150] Example 17: A flame-retardant polymer molded body is obtained by blending … 11.4% by weight of the product of Example 4 … The UL94 classification of the test specimen is V-0.

[0151] Example 18: A flame-retardant polymer molded body is obtained by blending … 12% by weight of the product of Example 4 … The UL94 classification of the test specimen is V-0.

[0152] Example 19: A flame-retardant polymer molded body is obtained by blending … 30% by weight of the product of Example 4 … The UL94 classification of the test specimen is V-0.

B. As mentioned in A. above, the Description states that Examples 9 to 11, 13, and 16 to 19 comprising the product of any of Examples 3 to 5: all of which are working examples, are more flame retardant (V-0 based on the UL94 classification) than Examples 7, 8, 12, and 15 comprising the product of Example 1 or 2, both of which are comparative examples ([0133] to [0155]). In light of this, it is reasonable to consider that the problem to be solved by the Inventions exists in the provision of a flame-retardant composition that is highly flame retardant.

It should be said that a person skilled in the art can recognize that the replacement of aluminum salt with a different kind of salt has no significant effect on flame retardance, taking into account the fact that there are examples (Exhibit Otsu 3), etc. that disclose the

method of manufacturing the dialkyl phosphinate of a specific metal other than aluminum on the premise that the important function that is necessary for dialkyl phosphinate to exert its flame retardance exists not in the salt part but in the dialkyl phosphinate part.

In addition, all of the five compounds defined as "telomer[s]" in the Inventions are dialkyl phosphinates that have a structure similar to the aluminum ethyl butylphosphinate that was confirmed to inhibit flame retardance as indicated in the working examples mentioned in A. above. Therefore, it can be said that a person skilled in the art can also recognize the aforementioned five compounds as substances that inhibit flame retardance in the same manner as aluminum ethyl butylphosphinate.

Therefore, it is not found that the effect confirmed in relation to aluminum diethylphosphinate and aluminum ethyl butylphosphinate cannot be extended or generalized to combinations of other kinds of salt and telomers.

(5) As mentioned above, none of the Defendant's allegations concerning Ground for Invalidation 2 (violation of the support requirement) are acceptable, and it is not found that the aforementioned ground for invalidation exists in relation to the Inventions.

4. Concerning Issue 2-3 (whether Ground for Invalidation 3 (lack of novelty and lack of an inventive step based on Exhibit Otsu 3) exists)

(1) The parties do not dispute the fact that the Inventions and the cited invention differ in that the "telomer" content in the Inventions is 0.01 to 6% by weight while that in the cited invention is not 0.01 to 6% by weight.

Therefore, determinations are made below concerning novelty and involvement of an inventive step on the premise of existence of such undisputed difference.

(2) Whether the Inventions lack novelty

The Defendant alleges that the Inventions are identical to the cited invention by citing the following facts: a substance called "telomer" is a by-product that is inevitably produced; it is not considered that an excellent effect is exerted by adjusting the concentrations of by-products; regarding the range of 0.01 to 6% by weight, wherein the upper limit is 600 times higher than the lower limit, it is not considered that an excellent effect is exerted within such a broad range compared to other ranges; the Description does not state the critical significance of the range of 0.01 to 6% by weight.

However, the parties do not dispute the existence of the aforementioned difference between the Inventions and the cited invention. Therefore, it is hardly considered that a structure that stipulates the numerical range of the "telomer" content: which is a combination of clear substances as mentioned above, in a specific manner as mentioned above is found to not be a substantial difference for the reason alleged by the Defendant. Consequently, the aforementioned allegation of the Defendant is not acceptable.

Therefore, it should be said that the ground for invalidation of lack of novelty alleged by the Defendant does not exist.

(3) Whether the Inventions lack an inventive step (whether a person skilled in the art can easily conceive of the difference)

A. The Defendant alleges that a person skilled in the art can easily conceive of the aforementioned difference by citing the following: [i] as the Plaintiff admits that a substance called telomer is a by-product and is a substance that inhibits flame retardance, a person skilled in the art can easily conceive of the idea that flame retardance is improved by reducing the concentration of a substance that inhibits flame retardance, which is a by-product; [ii] in Working Example 3 of Exhibit Otsu 3, the mol concentration of substances called telomers is 7.7 mol% (in terms of % by weight, 9.30% by weight), but the Description does not state that the Inventions exert an excellent effect compared to this working example; [iii] according to experiments conducted by the Defendant and third-party organizations, the same effect as the Inventions can be obtained with regard to flame-retardant compositions of which the telomer content is not in the range of 0.01 to 6% by weight, and similar results have been obtained by other third-party organizations; and [iv] Examples 1 and 2 (comparative examples) and Examples 3 to 5 (working examples) stated in the Description differ not only in the telomer content but also in the residual acetate content, and the difference in the effect should be considered to be based not on the difference in the telomer content but on the difference in the residual acetate content.

B. Concerning motivation to reduce the "telomer content"

Considering the case on this point, first, regarding [i] above, in the Lawsuit, the Plaintiff alleges that the telomers in the Inventions are substances that inhibit flame retardance based on the statements in the Description, and does not allege that it had already been publicly known as of the priority date of the Patent that telomers are substances that inhibit flame retardance. Therefore, the aforementioned allegation [i] originally lacks its premise.

Even looking at Exhibit Otsu 3, there is no statement to the effect that telomers are substances that inhibit flame retardance. In this regard, in Working Example 3 of Exhibit Otsu 3, a reaction product comprising 91.3 mol% of diethylphosphinate sodium salt, 7.7 mol% of butyl ethylphosphinate sodium salt, 0.7 mol% of ethylphosphonate sodium salt, and 0.3 mol% of unknown components was obtained by making ethylene react with sodium phosphinate. According to the aforementioned reaction, it is obvious to a person skilled in the art that diethylphosphinate sodium salt is the main product and butyl ethylphosphinate sodium is a by-product. It can be said that a person skilled in the art

generally reduces the content of a by-product as needed. However, according to the overall statements in Exhibit Otsu 3, dialkyl phosphinate is a substance that shows flame retardance, and a person skilled in the art ordinarily thinks that butyl ethylphosphinate is also a substance that shows flame retardance though it is a by-product, taking into account the fact that butyl ethylphosphinate also falls under dialkyl phosphinates. Therefore, it should be said that there is no motivation to reduce the content thereof.

Furthermore, there is no objective evidence that sufficiently proves that it was common general technical knowledge for a person skilled in the art to consider a telomer as a substance that inhibits flame retardance as of the priority date of the Patent. Incidentally, in this regard, the Defendant submitted evidence, such as a written opinion (Exhibit Otsu 17). However, even carefully considering the content thereof, the evidence must be considered as merely showing the subjective opinions of persons who prepared it, and it is thus hardly acceptable.

C. For the reasons described above, it should be said that no motivation for a person skilled in the art to reduce the "telomer content" can be found in the cited invention. It should then be said that in this case as mentioned above, allegations concerning the effect of the Inventions, such as the aforementioned allegations [ii] to [iv] of the Defendant, do not lead to the conclusion that a person skilled in the art could have easily conceived of difference between the Inventions and the cited invention.

D. Therefore, it should be determined that a person skilled in the art could not have easily conceived of the Inventions based on the cited invention, and it should be said that the ground for invalidation of lack of an inventive step as alleged by the Defendant does not exist.

(4) Based on the above, it is not found that Ground for Invalidation 3 (lack of novelty and lack of an inventive step based on Exhibit Otsu 3) exists in relation to the Inventions.

5. Concerning Issue 2-4 (whether Ground for Invalidation 4 (new violation of a description requirement associated with the Change of Segmentation) exists)

(1) The Defendant alleges that [i] the Inventions have the grounds for invalidation of violation of the clarity requirement or the support requirement on the premise that compositions comprising only one kind of substance called telomer and compositions comprising only one kind of dialkyl phosphinate other than substances called telomers also come to be included in the Inventions associated with the Change of Segmentation made by the Plaintiff. The Defendant also alleges that [ii] the Inventions have the ground for invalidation of violation of a description requirement as the Plaintiff's allegations are inconsistent in that it alleges that substances called telomers are components that inhibit flame retardance while it also alleges that the dialkyl phosphinate expressed by Formula

(I) comprising such telomers is a flame-retardant substance.

In this regard, it should be said that a change in segmentation into constituent features in the Claims made in the Lawsuit without making any change in the statement of the Claims would never change the gist of the Inventions. Consequently, the aforementioned allegation of the Defendant that a new ground for invalidation of violation of a description requirement arises in association with the Change of Segmentation made by the Plaintiff should be considered unreasonable in this sense. However, for confirmation, the aforementioned allegations [i] and [ii] are examined below.

(2) First, considering allegation [i], the Claims specify that in the Inventions, the "telomer content is 0.01 to 6% by weight" in the "dialkyl phosphinate expressed by Formula (I)." Therefore, it is clear that the Inventions contain the "dialkyl phosphinate expressed by Formula (I)" and telomers. Consequently, it should be said that the Inventions never include compositions comprising only one kind of substance called telomer and compositions comprising only dialkyl phosphinates other than substances called telomers. Therefore, the aforementioned allegation [i] is groundless.

(3) Next, considering allegation [ii], it is generally known that the dialkyl phosphinate expressed by Formula (I) is a flame-retardant substance (Exhibit Otsu 3), and the Plaintiff alleges that the Inventions found that even the dialkyl phosphinate expressed by Formula (I) becomes more flame retardant than compositions that have a higher telomer content if the telomer content thereof is reduced. Therefore, the Plaintiff does not allege that telomers have no flame retardance. Consequently, it cannot be said that the Plaintiff's allegations are particularly inconsistent and that they constitute any ground for invalidation of violation of description requirement.

(4) For the reasons described above, it is not found that Ground for Invalidation 4 (new violation of a description requirement associated with the Change of Segmentation) exists in the Inventions.

6. Concerning Issue 2-5 (whether Ground for Invalidation 5 (lack of novelty and lack of an inventive step that newly arose in association with the Change of Segmentation) exists

(1) The Defendant alleges that [i] the Inventions include flame-retardant compositions comprising only substances called telomers and flame-retardant compositions comprising only dialkyl phosphinates other than substances called telomers and that such compositions have the grounds for invalidation of lack of novelty and lack of an inventive step. In addition, the Defendant alleges as follows: [ii] the Plaintiff admits that a substance called telomer is a substance that inhibits flame retardance and it is obvious that flame retardance is improved if the concentration of a substance that inhibits flame retardance is reduced; therefore, the Invention wherein the concentration of substances called

telomers is reduced has the ground for invalidation of lack of an inventive step.

However, in this regard, the aforementioned allegation of the Defendant that the ground for invalidation of lack of novelty and lack of an inventive step newly arises in association with the Change of Segmentation made by the Plaintiff should be considered unreasonable for the same reason as explained in 5.(1) above. However, for confirmation, the aforementioned allegations [i] and [ii] are examined below.

(2) First, the aforementioned allegation [i] is groundless as long as it is clear that the Inventions contain the "dialkyl phosphinate expressed by Formula (I)" and telomers and the Inventions cannot be considered to include "flame-retardant compositions comprising only substances called telomers and flame-retardant compositions comprising only dialkyl phosphinates other than substances called telomers," as mentioned in 5.(2) above.

In addition, regarding the aforementioned allegation [ii], it cannot be said that a person skilled in the art who sees a prior art document can easily conceive of reducing the content of telomers that are substances that inhibit flame retardance and thereby producing a flame retardance improvement effect because of the following reasons, as mentioned in 4.(3) above: the Plaintiff has not admitted what the Defendant pointed out; the existence of a prior art document stating that a telomer is a substance that inhibits flame retardance is not found; and there is no objective evidence that sufficiently proves that it was common general technical knowledge for a person skilled in the art to consider a telomer as a substance that inhibits flame retardance as of the time of filing a patent application for the Patent.

(3) For the reasons described above, it is not found that Ground for Invalidation 5 (lack of novelty and lack of an inventive step that newly arose in association with the Change of Segmentation) exists in the Inventions.

7. Conclusion

As mentioned above, the Defendant is found to infringe or be likely to infringe the Plaintiff's patent right pertaining to the Patent by manufacturing, transferring or otherwise handling the Defendant's Product that falls within the technical scope of the Inventions. Also, no ground for invalidation is found in relation to the Patent. Therefore, it should be said that the Plaintiff may claim an injunction against the Defendant's manufacture, transfer, etc. of the Defendant's Product and may also claim the disposal of the Defendant's Product and the half-finished product thereof (object that has the structure of the Defendant's Product but has yet to be completed as a product).

Accordingly, all the Plaintiff's claims are well-grounded and are thus upheld, and the Court decides as set forth in the main text of the judgment. Incidentally, it is not reasonable to add a declaration of provisional execution in relation to paragraph 2 of the

main text. Therefore, a declaration of provisional execution is not added thereto.

Tokyo District Court, 47th Civil Division
Presiding Judge: TANAKA Koichi
Judge: YOKOYAMA Masamichi
Judge OKU Toshihiko
(Attachment Patent Gazette omitted)

Attachment

List of Defendant's Product

Product name: "LFR-8001"