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**Datasheet for the decision
of 7 August 2008**

Case Number: T 1732/06 - 3.3.06

Application Number: 97913201.6

Publication Number: 0939845

IPC: D21H 19/32

Language of the proceedings: EN

Title of invention:

Ovenable food tray and its manufacturing method

Applicant:

Stora Enso Oyj, et al

Opponent:

-

Headword:

Food Tray/STORA

Relevant legal provisions:

EPC Art. 123(2)

Relevant legal provisions (EPC 1973):

-

Keyword:

"Added subject-matter (all requests): yes"

Decisions cited:

-

Catchword:

-



Case Number: T 1732/06 - 3.3.06

D E C I S I O N
of the Technical Board of Appeal 3.3.06
of 7 August 2008

Appellants:

Stora Enso Oyj
Kanavaranta 1
FI-00160 Helsinki (FI)

and

Finnish Chemicals Oy
P.O. Box 7
FI-32741 Äetsä (FI)

Representative:

Saijonmaa, Olli-Pekka
Berggren Oy AB
P.O. Box 16
FI-00101 Helsinki (FI)

Decision under appeal:

Decision of the Examining Division of the
European Patent Office posted 11 May 2006
refusing European application No. 97913201.6
pursuant to Article 97(1) EPC 1973.

Composition of the Board:

Chairman: P.-P. Bracke
Members: P. Ammendola
J. Van Moer

Summary of Facts and Submissions

- I. This appeal is from the decision of the Examining Division refusing the European patent application No. 97 913 201.6, published as WO 98/22654.
- II. Claim 1 of the application as originally filed read:
- "1. An ovenable food tray (1) consisting of a board base of paperboard or cardboard (2) provided with at least one layer of heat resistant polymeric coating (3, 4), characterized in that the coating (3, 4) is lying on the side of the tray coming into contact with the food and comprises a polymerized crosslink structure consisting of an inorganic chained or crosslinked polymeric backbone with alternating silicon and oxygen atoms and comprising side chains and/or crosslinks formed by organic groups or chains."*
- III. The Examining division found that the ovenable food trays claimed in the then pending requests were obvious in view of the prior art and, thus, contravened Article 56 EPC 1973.
- IV. The Applicants (hereinafter Appellants) lodged an appeal against this decision.
- V. On 7 August 2008 oral proceedings took place before the Board. During the hearing the Appellants filed two sets of amended claims, respectively labelled as **main request** and **auxiliary request**, replacing all previous requests.

Claim 1 of the **main request** read:

"1. An ovenable food tray (1) consisting of a board base of paperboard or cardboard (2) provided with at least one layer of a polymeric coating (3, 4) to lend heat resistance and water-, water vapor- and grease-tightness to the coated tray, characterized in that the coating (3, 4) is lying on the side of the tray coming into contact with the food and comprises a polymerized crosslink structure made by polymerization of a reaction mixture substantially consisting of at least one trimethoxy- or triethoxysilane containing a reactive organic group, and, optionally, a reactive organic component, said polymerized crosslink structure consisting of an inorganic crosslinked polymeric backbone with alternating silicon and oxygen atoms and organic crosslinks formed by reaction of said reactive organic groups and, optionally, said reactive organic component."

Claim 1 of the **auxiliary request** read:

"1. Use of an ovenable food tray (1) for a consumer package of prepared food, the tray being formed of a coated board consisting of a board base of paperboard or cardboard (2) provided with at least one layer of a polymeric coating (3, 4) to lend heat resistance and water-, water vapour- and grease-tightness to the coated tray, the coating (3, 4) being lying on the side of the tray coming into contact with the food and comprises a polymerized crosslink structure made by polymerization of a reaction mixture substantially

consisting of at least one organosilane containing hydrolyzing and condensing groups, including a reactive organic group and optionally a reactive organic component containing at least one reactive epoxy, amino, hydroxyl, carboxyl, carbonyl, vinyl or methacrylate group, said polymerized crosslink structure consisting of an inorganic crosslinked polymeric backbone with alternating silicon and oxygen atoms and organic crosslinks formed by reaction of said reactive organic groups, and optionally said reactive organic component."

VI. In respect of the admissibility of the main request in view of Article 123(2) EPC, the Appellants argued that the introduction in claim 1 of the wording "*trimethoxy- or triethoxysilane containing a reactive organic group*", even though lacking of an exactly corresponding explicit disclosure in the original description and claims, would be sufficiently supported by the invention examples given in the application as filed.

They further stressed that the amendments introduced in claim 1 of the auxiliary request required all the silanes used for producing the polymerized crosslink structure of the polymer coating to be "*organosilane containing hydrolyzing and condensing groups, including a reactive organic group*" and, thus, to be responsible for both the inorganic crosslinked backbone and the organic crosslinks (since the compounds satisfying this definition specifically mentioned in the application are all siloxanes carrying one or more **organofunctional** groups directly bound to the Si atom, the silanes according to this definition are identified hereinafter as "**organofunctional siloxanes**"). This limitation was,

in the opinion of the Appellants, allowable under Article 123(2) EPC because of the original disclosure in the description at page 2, lines 6 to 12, and at page 6, lines 5 to 6, and supported by the fact that a non-organofunctional siloxane was only present in one of the five invention examples in a very minor amount.

Confronted with the observation of the Board that none of the cited portions of the original disclosure appeared to explicitly or implicitly suggest the possibility of using in general the organofunctional siloxane(s) as the sole silicon-containing compound(s) and that, on the contrary, the application as filed disclosed among the possible silicon-containing ingredient(s) also siloxane compounds that appeared manifestly unable to form any organic crosslink (hereinafter "**non-organofunctional siloxanes**"), the Appellants stressed that a limitation to reaction mixtures containing exclusively siloxanes that are organofunctional would nevertheless be consistent with the original disclosure of the application.

- VII. The Appellants requested that the decision under appeal be set aside and that a patent be granted on the basis of the set of amended claims of the main request or, in the alternative, of the auxiliary request both filed during the oral proceedings.

Reasons for the Decision

Main request

1. Article 123(2) EPC: claim 1

Article 123(2) EPC prohibits amendments of a European patent application that result in the extension of its subject-matter beyond the content of the application as filed. It is the case law of the Boards of Appeal that this content only encompasses what can be directly and unambiguously deduced from the disclosure of the application as filed (see e.g. the Case Law of the Boards of Appeal of the EPO, 5th edition, III.A.2.1).

1.1 Claim 1 of the present main request (see above section V of Facts and Submissions) differs from that originally filed (see above section II of Facts and Submissions), *inter alia*, in that it requires that the polymerized crosslink structure of the silicon-based coating of the claimed ovenable trays must be made by polymerizing a reaction mixture necessarily comprising "*at least one trimethoxy- or triethoxysilane containing a reactive organic group*".

1.2 The Appellants have conceded that no passage of the application as originally filed contains the wording "*trimethoxy- or triethoxysilanes containing a reactive organic group*" or another explicit expression providing an equivalent definition of this group of siloxane compounds. They nevertheless maintained that an implicit basis for this amendment was to be found in the examples reported in the original application, each

disclosing the use of organofunctional trimethoxy- or triethoxysilanes.

- 1.3 The Board notes however that the examples of the application only describe some (four) reaction mixtures each comprising, *inter alia*, at least one organofunctional trimethoxysilane carrying a glycidoxypropyl, vinyl or mercaptopropyl organofunctional group. Hence, these examples do not mention any organofunctional triethoxysilane at all.

The Board notes further that the presence of several specific trimethoxy- or triethoxysilanes within the list of the possible siloxanes according to formula (1) (see from page 6, line 10 to page 7, line 4, of the original application) does not amount to an implicit disclosure of the **whole** group of siloxane compounds now defined in claim 1.

- 1.4 Already for this reason the Board concludes that claim 1 of the main request contains added subject-matter and, thus, violates Article 123(2) EPC. Hence, this request cannot be allowed.

Auxiliary request

2. Article 123(2) EPC: claim 1

- 2.1 Claim 1 of the present auxiliary request (see above section V of Facts and Submissions) differs from that originally filed, *inter alia*, in that it now requires that the polymerized crosslink structure of the polymer coating must be made "*by polymerization of a reaction mixture substantially consisting of at least one*

organosilane containing hydrolyzing and condensing groups, including a reactive organic group and optionally a reactive organic component".

2.2 The Board finds incorrect the Appellants' attempt to justify the compliance of this amendment with Article 123(2) EPC for the reason that it would be a limitation consistent with the original disclosure. The issue relevant in view of this Article is not the absence of contradictions between the amendments and the original application, but rather the one already indicated above at point 1, i.e. whether or not the carried amendments result in an extension of the subject-matter that goes beyond what can be directly and unambiguously deduced from the disclosure of the original application.

2.3 In this respect the Board notes that the wording "*reactive organic component*" in the above-cited amended portion of claim 1 can only reasonably identify reactant(s) that contain no silicon atoms. Hence, the Board concurs with the Appellants that this amended portion expresses the requirement that the **sole** silicon-containing ingredient(s) of the reaction mixture must be organofunctional siloxane(s), so that each organosilane molecule used must at least potentially be able to simultaneously contribute to the formation of both the inorganic backbone (made of alternating silicon and oxygen atoms) and the organic crosslinks. Accordingly, this limitation also necessarily implies the exclusion from the reaction mixture of any non-organofunctional siloxane(s).

The Board agrees further with the Appellants that the original description at page 2, lines 6 to 12, (reading "*The coated paperboard or cardboard used in the tray according to the invention can be manufactured, starting from silane, an organic compound reacting with it, water, and a possible catalyst, whereby the silane is hydrolyzed and condensed, forming colloidal particles and reacts with the organic compound so that the silane produces a polymeric backbone mainly consisting of silicon and oxygen, and the organic compound works as a crosslinker. When organosilane containing reactive, organic groups is used, it may be unnecessary to use a separate organic compound.*") discloses the possibility of replacing in part or completely the organic crosslinking compound(s) with organofunctional siloxane(s) and, thus, implicitly discloses the whole group of possible reaction mixtures that **comprise** organofunctional siloxane(s) and optionally organic crosslinking compound(s).

- 2.4 However, the above-identified passage of original page 2 provides no information as to whether or not the reaction mixtures of the invention may also in general be free of any non-organofunctional siloxane(s). On the contrary, the possible presence of non-organofunctional siloxanes in the reaction mixture of the invention is explicitly suggested in the original application (see e.g. the formula 2 at page 7 and example 5). Nor have the Appellants indicated the existence of some evident logical or technical reasons linking the presence of whatever organofunctional siloxane(s) in the reaction mixture to the possibility of omitting in general any non-organofunctional siloxane ingredient(s). Hence, the above-cited passage at page 2 of the original

application does not state or imply that the organofunctional siloxane(s) may in general also represent the **sole** silicon-containing ingredient of the reaction mixture.

2.5 Similarly, no basis for this limitation can be found in the other cited portion of the original application at page 6, lines 5 to 6, (reading "*Organosilanes containing hydrolyzing and condensing group, or their hydrolyzates are suitable for starting materials of the process according to the invention*") because also this passage does not directly and unambiguously teach or imply that the organofunctional siloxane(s) that are "*suitable for starting materials*" may also in general constitute the **sole** silicon-containing ingredient of the reaction mixture.

2.6 Finally, the Appellants have stressed that the (five) invention examples are either free of non-organofunctional siloxanes or comprise a minor amount of these latter.

However, in the absence of any reasons justifying a generalization of this teaching, it cannot be directly and unambiguously deduced therefrom whether or not the non-organofunctional siloxanes can in general also be omitted from whatever reaction mixture containing whatever organofunctional siloxane(s).

2.7 Hence, the Board concludes that the selected group of reaction mixtures defined by the amended portion of claim 1 cited above at point 2.1 - i.e. the group formed of reaction mixtures wherein the organofunctional siloxane(s) represents the **sole**

silicon-containing ingredient(s) - has not been disclosed in the application as originally filed.

Therefore, the Board concludes that claim 1 of the auxiliary request violates Article 123(2) EPC and, thus, that this request cannot be allowed either.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

G. Rauh

P.-P. Bracke