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**Datasheet for the decision
of 20 September 2019**

Case Number: T 1713/16 - 3.3.09

Application Number: 12151466.5

Publication Number: 2447057

IPC: B32B27/32, B65D71/00

Language of the proceedings: EN

Title of invention:

Naked collation package

Patent Proprietor:

Innovia Films Limited

Opponents:

Irplast S.p.A.
British American Tobacco (Investments) Ltd
Treofan Germany GmbH & Co. KG

Headword:

Relevant legal provisions:

EPC Art. 100(b)
RPBA Art. 12(4), 13(1)

Keyword:

New main request: admission into the appeal proceedings - (no)
First and second auxiliary requests: admission into the appeal proceedings - (yes)
First and second auxiliary requests: sufficiency of disclosure - (no)

Decisions cited:

T 0052/15, T 1712/16

Catchword:



Beschwerdekammern

Boards of Appeal

Chambres de recours

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Case Number: T 1713/16 - 3.3.09

D E C I S I O N
of Technical Board of Appeal 3.3.09
of 20 September 2019

Appellant: Innovia Films Limited
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Decision under appeal: **Decision of the Opposition Division of the
European Patent Office posted on 6 June 2016
revoking European patent No. 2447057 pursuant to
Article 101(3) (b) EPC.**

Composition of the Board:

Chairman W. Sieber
Members: A. Veronese
 F. Blumer

Summary of Facts and Submissions

- I. The appeal was filed by the proprietor against the decision of the opposition division to revoke European patent No. 2 447 057. The application for the patent was filed as a divisional application from the earlier European patent application No. 08 788 633.9.
- II. In their notices of opposition, the three opponents requested the revocation of the patent in its entirety on grounds under Article 100(a) EPC (lack of novelty and lack of inventive step), Article 100(b) EPC and Article 100(c) EPC.
- III. In its decision the opposition division decided that the main request, filed by letter dated 24 March 2016 did not meet the requirements of Articles 123(2) and 123(3) and that the auxiliary request, filed during the oral proceedings before the opposition division ("Annex 1" to the decision) was to be admitted into the opposition proceedings, but did not comply with Article 83 EPC.
- IV. In its statement setting out the grounds of appeal the proprietor (appellant) requested that the decision of the opposition division be set aside and that the patent be maintained on the basis of the main request or alternatively the first auxiliary request, both requests filed with said statement. The appellant referred to D24, already filed during the opposition proceedings, and to two other documents D45 and D46, which were annexed to the statement setting out the grounds of appeal:

D24: Experimental report filed by opponent 3 by letter dated 23 December 2014.

D45: Expert opinion of E. M. Mount III dated
4 October 2016.

D46: Statement setting out the grounds of
appeal in case T 52/15 (the parent case).

V. The main request is not relevant to this decision.
Claim 1 of **the first auxiliary request** reads:

*"1. A method for forming a naked collation package comprising
wrapped individual packages comprising:*

*a. providing an arrangement of packages individually wrapped
in a filmic polyolefinic material;*

*b. providing a naked collation film for nakedly wrapping said
individually wrapped packages, the naked collation film
comprising a polyolefinic core layer C, a polyolefinic
inner sealing layer A on the inner surface of the naked
collation film and a polyolefinic outer sealing layer B on
the outer surface of the naked collation film;*

*the polyolefinic material of the inner sealing layer A being
selected for sealing incompatibility with the filmic polyolefinic
material of the individually wrapped packages under a specified
sealing condition, and the polyolefinic material of the outer
sealing layer B being selected for sealing compatibility with B
and for sealing compatibility with A under the selected sealing
condition, wherein the naked collation film having an inner
sealing layer A and an outer sealing layer B is rendered
incompatible for sealing purposes at a sealing condition with the
filmic polyolefinic material wrapping the individual packages, the
naked collation film having A to B, A to A and B to B sealing
compatibility with itself at the sealing condition, sealing
compatibility of a layer being indicated by a seal strength at
least 50g/25mm higher than the seal strength of the layer of the
naked collation film to the polyolefinic material wrapping the*

individual packages, but being sealingly incompatible at the sealing condition with the filmic polyolefinic material of the individually wrapped packages, sealing incompatibility being indicated by a seal strength of less than 40g/25mm at the sealing condition, and being provided by providing in at least an inner sealing layer of the naked collation film at least one polyolefinic material derived from a monomer of different chain length from a monomer from which at least one polyolefinic material in the filmic material of the wrapped individual packages is derived, wherein the external surface of the filmic polyolefinic material of the individually wrapped packages comprises at least one polyolefinic component derived from a monomeric olefin having a carbon chain length x, and the polyolefinic material of the inner sealing layer A comprises at least one polyolefinic component derived from a monomeric olefin having a carbon chain length y, y being different from x wherein both x and y are from 2 to 4, wherein the polyolefinic material of the outer sealing layer B also comprises at least one polyolefinic component derived from a monomeric olefin having chain length y, wherein:

I. when the surface polyolefinic material of the individually wrapped packages comprises a polyethylenic component, the polyolefinic material of the inner sealing layer A comprises a polypropylenic component and a polybutylenic component, and the polyolefinic material of the outer sealing layer B also comprises a polypropylenic and/or a polybutylenic component;

II. when the surface polyolefinic material of the individually wrapped packages comprises a polypropylenic component, the polyolefinic material of the inner sealing layer A comprises a polyethylenic component and a polybutylenic component, and the polyolefinic material of the outer sealing layer B also comprises a polyethylenic and/or a polybutylenic component; and

III. when the surface polyolefinic material of the individually wrapped packages comprises a polybutylenic component, the polyolefinic material of the inner sealing layer A comprises a polyethylenic component and a polypropylenic component, and the polyolefinic material of the outer sealing layer B also comprises a polyethylenic and/or a polypropylenic component,

wherein the sealing condition comprises conditions of temperature elevated above 100°C and pressure and a dwell time for the sealing operation, the method further comprising the steps of:

c. arranging the individually wrapped packages in an ordered configuration in contact with polyolefinic sealing layer A of the naked collation film;

d. forming a girth seal by wrapping the naked collation film around the ordered configuration of individually wrapped packages to form a film tube with overlapping edges and sealing together the overlapping edges of the film tube, without sealing inner sealing layer A to the filmic polymeric material of the individually wrapped packages; and

e. forming envelope seals at each end of the package by folding in the film tube and sealing the folded ends, without sealing inner sealing layer A to the filmic polymeric material of the individually wrapped packages."

VI. In their reply to the statement setting out the grounds of appeal the opponents (respondents 1, 2 and 3) requested that the appeal be dismissed. Furthermore, respondent 3 requested that the appeal be rejected as inadmissible and that the main request, the first auxiliary request, D45 and D46 not be admitted into the

appeal proceedings. Respondent 2 only objected to the admission of D45. Respondent 1 filed the following document:

D47: Expert opinion of F. Ciardelli, dated
20 February 2017.

VII. By letter dated 10 June 2019 the appellant filed a second auxiliary request. In this and in a following letter the appellant presented further arguments relating to added subject-matter. It also requested that for any discussion on this issue the case be remitted to the opposition division.

VIII. Claim 1 of **the second auxiliary request** differs from claim 1 of the first auxiliary request in that the two following features were deleted:

- *"sealing compatibility of a layer being indicated by a seal strength at least 50g/25mm higher than the seal strength of the layer of the naked collation film to the polyolefinic material wrapping the individual packages"*
- *"sealing incompatibility being indicated by a seal strength of less than 40g/25mm at the sealing condition".*

IX. In their further letters respondents 1 and 3 requested that the second auxiliary request not be admitted into the appeal proceedings. Respondent 3 requested that the issue of added subject-matter be dealt with on appeal. Further arguments relating to added subject-matter and sufficiency of disclosure were presented.

X. The parties were summoned to oral proceedings. In a written communication the board drew their attention to the points to be discussed.

XI. On 20 September 2019, oral proceedings took place before the board. As announced, respondent 2 was not represented. Respondent 3 withdrew its request that the appeal be rejected as inadmissible. At the beginning of the oral proceedings, the appellant filed a new main request replacing the main request filed with the statement setting out the grounds of appeal. Respondents 1 and 3 requested that this request not be admitted into the proceedings. The parties in attendance withdrew their respective requests that added subject-matter should or should not be discussed during the appeal proceedings. The parties also declared that they wished to rely on their submissions made the previous day during the oral proceedings for the parallel case T 1712/16. At the end of the debate the chairman announced the decision.

XII. Claim 1 of the new main request differs from claim 1 of the second auxiliary request in that the two following features were inserted into the claim before point I and after point III, respectively:

- *"wherein the polymeric material of the inner sealing layer comprises at least one polyolefinic component having a low heat seal threshold and the polymeric material of the outer sealing layer comprises at least one polyolefinic component having a low heat seal threshold"*

- *"wherein the seal strength of the inner sealing layer of the naked collation film to itself and the outer sealing layer at the selected sealing condition is above 100g/25mm".*

XIII. The appellant's arguments, where relevant to the decision, may be summarised as follows.

All requests had to be admitted into the appeal proceedings. The new main request was filed in response to the board's decision taken the day before relating to the parallel case T 1712/16. Claim 1 of this new request was based on a combination of claims 1, 2 and 4 of the second auxiliary request. The first auxiliary request, filed with the statement setting out the grounds of appeal, was based on the auxiliary request admitted by the opposition division into the opposition proceedings. It differed from it in that it contained simple amendments which addressed the grounds for revocation. The second auxiliary request addressed the objection of added subject-matter taking into account the outcome of decision T 52/15 relating to the parent case.

D45 and D46 mainly addressed issues relevant to lack of sufficiency of disclosure, which was the reason for revocation. Both documents were filed at the first possible stage of the appeal proceeding as a direct reaction to the opposition division's decision and had to be admitted.

None of the requests on file contained subject-matter that extended beyond the content of the application and the parent application as filed. All features in claim 1, including the values for seal strength and temperature, were disclosed in those applications and, since they were preferred features, their combination did not create new subject-matter. Some of the values were deleted in the second auxiliary request.

The claimed invention was sufficiently disclosed and could be carried out by the skilled person without undue burden. The inventive concept of the invention resided in the selection of materials for the sealing layers of the collation film and of the film used to

wrap the individual packages. By selecting polyolefin materials with different monomeric chain lengths, films could be prepared that satisfy the required sealing compatibility and sealing incompatibility. The selection criteria given in claim 1 of the requests on file allowed the skilled person to identify materials which were likely to work in a straightforward manner. Points I, II and III of claim 1 provided further guidance on which materials to use. As explained in the expert opinion D45, screening tests followed by optimisation experiments could be carried out to identify suitable materials, using established methods. Furthermore, many polymeric materials were commercially available. Since their composition and properties were usually known, the skilled person could have identified those most suitable for the invention. The patent in suit and D24 described many films according to the invention having the claimed sealing properties. It was true that some did not achieve the desired effect, and that the results were affected by some variability. However, variability and occasional failures were to be expected in the field and could be addressed by applying standard statistical approaches. The deletion of some parameters in claim 1 of the second auxiliary request addressed the objections of added subject-matter and decreased the burden imposed on the skilled person carrying out the invention.

XIV. The respondent's arguments, where relevant to the decision, may be summarised as follows.

None of the appellant's requests should be admitted. The new main request, filed during the oral proceedings before the board, raised new questions of added subject-matter. The first auxiliary request was derived from the auxiliary request filed during the oral

proceedings before the opposition division. Since the opposition division was wrong to admit that request into the opposition proceedings, the first auxiliary request should not be admitted into the appeal proceedings. The second auxiliary request was filed at a late stage of the appeal proceedings. The removal of parameters from claim 1 created a new scenario in relation to issues of lack of clarity and sufficiency. D45 and D46 could have been filed during the opposition proceedings and were not admissible.

Claim 1 of all requests defined combinations of parameters and materials which were not disclosed in the application and in the parent application as filed.

The patent did not disclose the claimed invention in a manner sufficiently clear and complete for it to be carried out by the skilled person. The claims were formulated by referring to the result to be achieved, namely achieving certain compatibility and incompatibility requirements. The chemical structure of the materials used to prepare the films was defined very broadly. The only structural requirement was that the materials comprised at least one polyolefin component having a monomeric chain length of 2 to 4 and fulfilled the conditions set forth in points I to III of claim 1. Sealing incompatibility had to be achieved by using components with different monomeric chain lengths. This criterion was insufficient for selecting materials having the desired properties. The sealability of a polyolefinic material did not only depend on the chain length of its monomeric units, but also on other factors, such as whether the material was a homopolymer or copolymer, the degree of ramification and the amounts of the individual components. The patent showed that the sealing strength of the tested

films changed significantly and unexpectedly depending on the presence or absence of additives and on whether the films were subjected to other treatments. A large variability in the results was observed. The patent and D46 showed that films fulfilling the claimed structural requirements did not achieve the desired sealability requirements. The composition of the tested films was not adequately described. To find out suitable materials the skilled person had to carry out a research project, relying solely on trial and error. This represented an undue burden. As far as the auxiliary requests were concerned, the limitations did not make the task of carrying out the invention any easier. The views and statements of the expert in D45 did not correspond to those of a skilled person at the filing date, and had to be disregarded.

Reasons for the Decision

Main request

1. *Admission*
 - 1.1 The new main request was filed during the oral proceedings before the board. According to the appellant this late filing was justified, because it was a reaction to the board's decision, taken the day before, to dismiss the appeal relating to the parallel case T 1712/16. Claim 1 of the new main request was based on a combination of claims 1, 2 and 4 of the second auxiliary request.
 - 1.2 According to the appellant the amendments made were simple, did not create new subject-matter and could be dealt with without difficulty by the other parties.

- 1.3 The board does not agree. It is true that the features inserted into claim 1 are disclosed in claims 2 and 4 of the second auxiliary request. However, new claim 1 is not the result of a simple combination of those claims. The seal strength value of "above 100g/25mm" is not the only one mentioned in claim 4 of the second auxiliary request. In fact, this claim also refers to a value of "above 400g/25mm". Furthermore, claim 4 defines the seal strength of the inner sealing layer of the naked collation film to itself and/or the outer sealing layer, whereas new claim 1 refers to the seal strength of the inner sealing layer of the naked collation film to itself **and** the outer sealing layer.
- 1.4 Furthermore, claim 1 of the second auxiliary request is itself the result of an extensive recasting of the claims and parts of the description as filed. The inclusion of additional features into an already complex amended claim, including those disclosed in some dependent claims, raises complex new issues as to whether new subject-matter has been created. Since this represents a change to the party's case at an extremely late stage of the appeal proceedings, the new main request is not admitted into the proceedings (Article 13(1) RPBA).

First auxiliary request

2. Admission

- 2.1 The first auxiliary request was filed with the statement setting out the grounds of appeal. It is based on the auxiliary request, which was filed during the oral proceedings before the opposition division.

2.2 The first auxiliary request on appeal differs from the auxiliary request before the opposition division only in that certain combinations of materials used for preparing the layers of the naked collation package have been ruled out replacing an "and/or" with an "and" in point III of claim 1. The minutes of the oral proceedings before the opposition division and the appealed decision indicate that the admissibility of said previous auxiliary request was discussed. The opposition division considered that it represented an attempt to overcome the opponents' objections and decided to admit it into the opposition proceedings and dealt with the request.

2.3 It is not the function of the board to review all the facts and circumstances of the case as if it had been in the place of the opposition division, and to decide whether or not it would have exercised such discretion in the same way. The board sees no compelling reasons to consider that the opposition division exercised its discretion wrongly or in an unreasonable way, for example on the grounds that it had applied the wrong principles. It is also apparent that the parties were in a position to discuss the issue of sufficiency of disclosure and that the opposition division considered that it could decide on the case.

2.4 Thus, there are no reasons to challenge the opposition division's decision to admit the previous auxiliary request into the opposition proceedings. Consequently, and taking into account that:

- the amendments distinguishing the first auxiliary request filed in appeal from said previous auxiliary request are not complex, and

- that the amendments can be considered a reaction to the opposition division's finding that the claimed invention is not sufficiently disclosed, and
- that it was filed at the earliest possible stage of the appeal proceedings,

the first auxiliary request cannot be considered inadmissible (Article 12(4) RPBA).

3. *Admission of documents D45 and D46*

3.1 D45 and D46 were filed by the appellant with the statement setting out the grounds of appeal. D45 is an expert opinion addressing different issues regarding sufficiency of disclosure as discussed in the appealed decision. In its statement setting out the grounds of appeal the appellant relied on this document to substantiate its argument that the appealed decision had to be set aside. Thus, D45 is considered a direct response to the opposition division's decision.

3.2 D46 is the statement setting out the grounds of appeal filed in the proceedings relating to the parent case (T 52/15; EP 2 139 678 B1). Since the issues relating to sufficiency of disclosure discussed in that statement are also relevant to the present case, the board saw no compelling reason not to admit D46 into the proceedings.

3.3 For these reasons, and taking into account that they were both filed at the earliest possible stage of the appeal proceedings, D45 and D46 cannot be considered inadmissible (Article 12(4) RPBA).

4. *Sufficiency of disclosure*

4.1 The claimed invention relates to a method for forming a naked collation package. Naked collation is an effective way of reducing packaging costs and materials. According to the method a number of packaged articles (cigarette packets, for example), which are individually wrapped with a first film, are grouped together and packaged as a larger bundle using a second overwrap film, the "naked collation film". In the last step of the method the overlapping edges of the naked collation film are heat sealed.

4.2 The opposed patent teaches that the manufacture of a naked collation package is not an easy task. When a naked collation film used to wrap the bundle of individual packages is heat sealed, there is a risk that the naked collation film will not only seal to itself but also to the underlying film used to wrap each individual package. Particularly when individual packages are wrapped in polypropylene film (as in the cigarette industry), this problem has been addressed previously by providing the polypropylene overwrap with an acrylic coating, which seals well with itself but not with the polypropylene wrapping of the individual packages (paragraph [0017]). The object of the claimed invention is the provision of a method for manufacturing a naked collation package which prevents this problem and avoids the use of an expensive polyacrylate coating (paragraph [0018]).

4.3 The naked collation film used in the method of claim 1 comprises a polyolefinic core layer C, a polyolefinic inner sealing layer A on the inner surface of the naked collation film and a polyolefinic outer sealing layer B on the outer surface of the naked collation film. In

the sealing condition (comprising a temperature of above 100°C, pressure and a dwell time) the naked collation film must have A to B, A to A and B to B sealing compatibility with itself. Furthermore, claim 1 requires that the polyolefinic material of the outer sealing **layer B** is selected for sealing compatibility in the sealing condition with layers A and B, but the polyolefinic material of the inner sealing **layer A** is selected for sealing incompatibility in the sealing condition with the polyolefinic material of the individually wrapped packages.

4.4 Claim 1 requires that the sealing incompatibility is achieved by providing in at least an inner sealing layer of the naked collation film at least one polyolefinic material derived from a monomer of different chain length from a monomer from which at least one polyolefinic material in the filmic material of the wrapped individual packages is derived. More specifically, claim 1 requires that:

- *"the external surface of the filmic polyolefinic material of the individually wrapped packages comprises at least one polyolefinic component derived from a monomeric olefin having a carbon chain length x", and*
- *"the polyolefinic material of the inner sealing layer A comprises at least one polyolefinic component derived from a monomeric olefin having carbon chain length y, y being different from x, wherein both x and y are from 2 to 4", and*
- *"the polyolefinic material of the outer sealing layer B also comprises at least one polyolefinic*

component derived from a monomeric olefin having chain length y".

4.5 Claim 1 further defines in points I, II and III the at least one polyolefinic component present in the sealing layers A and B of the naked collation package, based on the at least one polyolefinic component present in the film used to wrap the individual packages. In these points, the components previously defined as being derived from a monomeric olefin having a carbon chain length from 2 to 4 are explicitly mentioned by using the standard chemical nomenclature "polyethylene", "polypropylene" and "polybutylene" respectively.

4.6 According to the appellant the terms "sealing compatibility" and "sealing incompatibility" were readily understood by the skilled person. The invention aimed at providing a naked collation package in which the collation film could seal to itself without sealing to the unit wrap of the individual packages within it. This concept was easily understood by the skilled person and they would realise that the relative seal strengths were important. If, for example, there was a low sealing strength between the layers of the collation film, there had to be an even lower sealing strength between the collation film and the unit wraps of the individual packages. Furthermore, the level of acceptable heat sealing strength did not comprise a universal value for all packaging situations, but rather must be defined for each packaging application. The naked collation film had to be "fit for use" in the intended packaging application. For example, a skilled person would understand that for practical purposes a certain seal strength would be necessary to form a functioning heat seal on the package in most end use applications (statement of grounds of appeal, points 14

and 19 and D45, points 11, and 17 to 21). This concept was reflected in claim 1, requiring that the seal strength of each of the sealing layers of the naked collation film to itself and/or to the other layer of that film should be at least 50/25mm higher than that between those sealing layers and the polyolefinic material of the unit wraps. This seal strength is defined as "sealing compatibility", whereas "sealing incompatibility" is defined as a seal strength of less than 40g/25mm.

- 4.7 The inventive idea was to use polyolefin materials obtained from olefinic monomers having different chain lengths. Choosing films comprising at least one polyolefin component derived from a monomer satisfying the specified chain length requirements, that also satisfied the conditions in points I to III, the skilled person would have been able to select in a straightforward manner materials that were likely to work. After selecting these materials, the skilled person would have had to conduct experimental tests to ascertain whether the selected films had the required relative seal strengths (statement of grounds of appeal, points 34, 37 and 38 and D45 points 31 to 34). Heat seal tests were suitable for this purpose. Performing such tests did not amount to an undue burden, because heat seal profiles were "the bread and butter measurement of the skilled person working in the field" (statement of grounds of appeal, points 29 and 39 and D45, point 24).
- 4.8 However, as pointed out by the respondents, the only structural features characterising the materials defined in claim 1 are: that the materials are polyolefins, that they comprise at least one polyolefinic "component" derived from a monomeric

olefin having the specified carbon chain length, and that component combinations satisfying the conditions in points I to III are included. Neither the molecular weight, the linearity, the possible degree of cross-linking or the relative amount of the "components" in the polyolefin are specified. The other features in claim 1 relating to the films are functional features defining properties, such as compatibility and incompatibility, in terms of a result to be achieved.

4.9 Thus, the controversial question in the present case is whether, in light of the very broad scope of claim 1, the skilled person is given sufficient guidance for performing the invention in the whole range claimed, without undue burden.

As mentioned above, according to the appellant, by fulfilling the structural requirements of claim 1, the skilled person would in a "straightforward manner" provide materials which are "likely to work".

4.10 The board does not share this view. The polymer properties which influence the heat sealing ability of a material, such as the melting temperature, vary remarkably within polymers made from the same monomeric unit. For example, ethylene polymers with a different macromolecular structure in terms of linearity, ramification, molecular weight, have significantly different melting temperatures, density and tensile strength (D47, page 3, table). Furthermore, the melting and the glass transition temperature of polymer blends vary significantly depending on the respective content of the individual components present (D47, page 2, figure 1). This is worth mentioning particularly in connection with materials, such as those claimed, where the component allegedly modulating the sealing

properties of the sealing layer is present as "at least one polyolefinic component".

- 4.11 Furthermore, the patent in suit shows that the sealing properties of the tested films vary considerably, depending on factors unrelated to the nature and the amount of polyolefinic component used for modulating sealability. Paragraph [0037] foresees that the sealing layers can contain other additives, besides the at least one polyolefin component, for different purposes. However, as shown in the patent, these additives considerably influence the seal strength. Films made of the same polyolefinic component and differing only by the presence of an additive such as silica and silicone gum have completely different sealing properties: compare example 5 with example 7 and example 6 with example 8 in tables 1 and 4.
- 4.12 Furthermore, the patent teaches that treatments such as corona discharge can also influence the sealability of the polyolefin layers (paragraph [0029]). This is confirmed by the data shown in Table 4. What's more, the effect of this treatment is unpredictable: depending on the film composition it increases or decreases the seal strength: compare examples 1 and 2 and examples 5 and 6 in tables 1 and 4.
- 4.13 Significant fluctuations in the seal strength are also observed when some of the tests are repeated: compare the results on pages 10 and 11 relating to the films of example 2, and those on pages 11 and 14 relating to example 7. The seal strength does not always correlate with the sealing temperature either: compare the results on pages 10 and 11 relating to the films of example 2 and those on page 12 relating to example 7.

- 4.14 The appellant admitted that different factors could influence the seal strength and induce variability in the results. However, in its view the skilled person found sufficient information in the patent for selecting materials suitable for carrying out the invention. Variability had to be accepted in the field and could be addressed by repeating the tests and using statistical approaches. The majority of tested films provided the required seal strength. The examples provided guidance for selecting materials for the preparation of the naked collation packages according to the invention.
- 4.15 The board does not agree with this view. It is not disputed that the patent describes numerous tests showing positive results. However, the materials of the films used for carrying out the tests are not described in a way that allows the skilled person to identify the components providing the sealing compatibility or incompatibility properties.
- 4.16 In the examples of the patent, a three layer polymeric tube (i.e. the naked collation film) was formed by coextruding a core layer with a layer of a random polyethylene/polypropylene/polybutylene terpolymer on both sides of the core layer (i.e. the sealing layers). Prior to coextrusion, the skin layer materials for the inner and outer layers were blended with further "functional materials intended in accordance with the invention to provide selective sealability properties of the film" (paragraph [0044]). Neither the amount nor molecular weight or the degree of ramification of the components making up the terpolymer are given. Furthermore, the terpolymer contains all possible "components" defined in claim 1, namely polyolefins obtained from olefins where the carbon chain length is

respectively $y=2$ (ethylene), $y=3$ (propylene) and $y=4$ (butylene).

4.17 The composition of the films used as a model for the unit wrap film is not described either. The tested films are said to be commercially available products: "GLS20", "GLT20" and "XLT20". However, their composition is not indicated. Documents allegedly describing their composition were filed during the opposition proceedings. Yet, as noted by the respondents, there is no evidence that the information contained in these documents was available to the skilled person at the relevant date and that the material specifications described therein correspond to those of the films used for the tests.

4.18 In the absence of adequate information on the composition of the tested materials, it is immaterial that numerous film combinations having the claimed sealing properties are exemplified in the patent. Without said information, it is impossible to ascertain which, if any, of the "at least one polyolefinic component derived from a monomeric olefin having carbon chain length x ", or respectively y , confers compatibility and/or incompatibility properties to the tested films.

In this context, the board also notes that some of the exemplified films which fulfil the structural criteria given in claim 1 do not achieve the required sealability requirements: see example 5 in table 4 on page 9, in table 5 on pages 11, 12 and 14; example 2 in table 5 on page 13; example 6 in table 5 on page 14. Even more importantly, the patent does not mention why some of the materials fulfilling the structural criteria given in claim 1 do have the desired sealability properties, whereas others do not.

4.19 Analogous considerations apply to the tests reported in D24, a post-filed document filed by opponent 3. The appellant referred to table 7, which describes a number of film combinations having the desired properties. In its opinion D24 showed that the skilled person could carry out the claimed invention by following the instructions given in the patent. However, the appellant conceded that some of the materials tested in D24 did not provide the required sealability requirements (examples 4, 8 and 10). It also admitted that it was known that polypropylene, a polyolefin derived from an olefin having a carbon chain of 3, was not suitable for preparing sealing layers. This was also apparent from the tests in D46. However, the appellant did not explain why polypropylene, provided in claim 1 as a "component" of the sealing layers, was unsuitable. For these reasons, D24 does not make it possible to conclude that at the filing date the invention could be carried out over the entire claimed scope without undue burden.

4.20 The appellant argued that paragraph [0024] of the patent in suit provided additional guidance for selecting materials having the required compatibility and incompatibility requirements. This paragraph teaches, in a first sentence that *"One way in which such sealing incompatibility can be provided is by providing in at least the inner sealing layer of the naked collation film at least one polyolefinic material derived from a monomer of different chain length from a monomer from which at least one polyolefinic material in the filmic material of the wrapped individual packages is derived"*. It also teaches, in a second sentence, that *"Another suitable way of achieving such sealing compatibility is to select the material of at*

least the inner sealing layer (and/or the outer sealing layer) to have a low seal threshold, at which the sealing layer will be sealingly compatible with itself at the sealing condition and/or with the other sealing layer of the naked collation film, but will be sealingly incompatible under that condition with the polyolefinic filmic material of the wrapped individual packages. In this case the naked collation film is designed to have a very low seal initiation characteristic because it is formed from at least one polymer having a low heat seal threshold. Sealing at a low temperature prevents the naked collation film from sticking to the unit wraps".

4.21 However, the first sentences merely repeats the instructions which are already given in claim 1. The idea presented in the second sentence, of selecting materials having low seal threshold could, at most, assist with preparing films which seal with each other. As far as incompatibility is concerned, it simply reiterates the effect that the claimed invention intends to achieve. Thus, paragraph [0024] does not provide any additional instruction, beyond the teaching of claim 1, for carrying out the invention.

4.22 Referring to D45, the appellant argued that for selecting suitable polyolefinic materials the skilled person would have considered using commercially available materials. The composition of these materials was usually described generically or could be identified by reverse engineering and analytical techniques. Some properties which influenced their heat sealing behaviour, such as melting temperature, were also usually known or could be easily determined. These would have guided the skilled person in their search for suitable materials. By conducting screening

experiments, followed by further optimisation tests, the skilled person could prepare films according to the invention. The amount of the relevant "at least one component" in the film was also not relevant. This amount certainly influenced the sealing strength. Nevertheless, by testing, the skilled person could adjust this amount to achieve the required sealing properties. This did not amount to an undue burden (statement of grounds of appeal, points 12-13 and 36 and D45, points 25-35).

4.23 The board does not endorse this view either. As noted by the respondents, D45 was prepared by a highly qualified person engaged by the patentee, who expressed opinions and views eight years after the date of filing of the opposed patent. In the absence of adequate evidence of common general knowledge at the filing date, the opinions and views expressed in D45 can thus not be considered to be those of the skilled person working in the field at the relevant date. As a consequence, it cannot be assumed that at the relevant filing date the skilled person would have selected materials using criteria or relying on material properties which are not mentioned in the patent. Furthermore, the claims are not limited to the use of commercially available materials, but encompass the use of any combination of films which can be manufactured using materials comprising "at least one component" satisfying the structural criteria specified in the claims. These materials have to be prepared and films comprising them have to be manufactured, in order for the tests to be carried out.

4.24 For these reasons, taking into account all the above considerations (points 4.10-4.23) the board concludes that, by applying the selection criteria outlined in

the patent a skilled person would not have been able to "select in straightforward manner" materials which were "likely to work". All the evidence on file indicates that a skilled person would not have been in a position to make reasonable predictions as to whether layers prepared by relying on those criteria also satisfy the required compatibility and incompatibility features. In order to carry out the invention over the entire scope of the claims, the skilled person would have to undertake a major and time-consuming research project. This would involve the preparation of combinations of film materials, fulfilling the structural requirements given in claim 1 and their testing, to identify those suitable for the invention. In this process, the skilled person would have to rely solely on trial and error. The board considers that this constitutes an undue burden. Therefore, the invention defined in claim 1 of the first auxiliary request is insufficiently disclosed (Article 100b EPC).

Second auxiliary request

5. *Admission*

5.1 The second auxiliary request was filed on 10 June 2019, after the summons for the oral proceedings before the board. It differs from the first auxiliary request in that the paragraphs referring to the values of "50g/25mm" and "40g/25mm" for defining sealing compatibility and incompatibility were deleted. While admittedly late, this request was filed three months before the hearing, a time-period which the board considers sufficient for other parties to understand the amendments made and their impact on the proceedings. The amendments address both the objections of lack of sufficiency of disclosure and of added subject-matter

raised during the proceedings. The request can be considered admittedly to be a late-filed response to the respondents' objections raised in their replies to the statement setting out the grounds of appeal. Therefore, the fact that this request also takes into account the outcome of the decision T 52/15, concerning the parent case, cannot be held against the appellant.

5.2 Taking into account the particular circumstances of the case, the board considers that the second auxiliary request is to be admitted into the appeal proceedings (Article 13(1) RPBA).

6. *Sufficiency of disclosure*

6.1 According to the appellant, the deletion of the numerical values "50g/25mm" and "40g/25mm", which were used to define the sealing compatibility and incompatibility, reduced the burden put on the skilled person trying to carry out the invention. This opinion is not endorsed by the board. As already discussed above (point 4.6), the relative strength of the seals between the films of the naked collation package is significant for the invention. The seal between the layers of the collation film has to be sufficiently strong to be "fit for use" in the intended packaging application, and the seal between the film of the unit wraps and the collation film has to be sufficiently weak so that they do not stick together. Thus, even if the aforementioned numerical values have been deleted, a substantial difference in seal strength has to be arrived at in order to implement the invention. Replacing fixed values with an open, functionally defined requirement, does not reduce the burden put on the skilled person. When looking for material combinations that fulfil this functional requirement,

the skilled person would have encountered the same technical difficulties discussed when dealing with the previous requests.

- 6.2 Accordingly, for the same reasons already given with respect to the first auxiliary request, the invention defined in claim 1 of the second auxiliary request is insufficiently disclosed (Article 100b EPC).

Order

For these reasons it is decided that:

1. The appeal is dismissed

The Registrar:

The Chairman:



D. Magliano

W. Sieber

Decision electronically authenticated