

OPINION UNDER SECTION 74A

Patent	EP 2643238
Proprietor(s)	R. Faerch Plast A/S
Exclusive Licensee	n/a
Requester	Ingenium IP Limited
Observer(s)	n/a
Date Opinion issued	07 November 2016

The request

1. The comptroller has been requested to issue an opinion as to whether EP 2643238 (“the patent”) is valid in light of eight patent documents (D1 to D8), along with two English language equivalents (D1* and D2*) and one document offered as technical background. The request makes inventive step arguments. All of the patent documents referred to in the request were published well before the priority date of the granted patent.

Observations and preliminary matters

2. The patentee and the requester have provided observations on the request and observations in reply. In addition both the patentee and requester have provided further submissions. Rule 96 of the Patents Rules 2007 (as amended) makes provision for observations and observations strictly in reply. There are no provisions for further rounds of observations and consequently I shall disregard any submissions after the initial observations and observations strictly in reply.
3. In their observations the patentee argues that documents D6 and D7 or EP 1826139 and WO 2008/017308 should be ignored in this opinion since they were considered during the pre-grant consideration of the patent before the European Patent Office (EPO) and they were also listed on the search report on the application under the Patent Cooperation Treaty (PCT) from which the patent derives.
4. Section 74A(3) of the Patents Act 1977 states:

The comptroller shall issue an opinion if requested to do so under subsection (1) above, but shall not do so –

...

(b) if for any reason he considers it inappropriate in all the circumstances to do so.

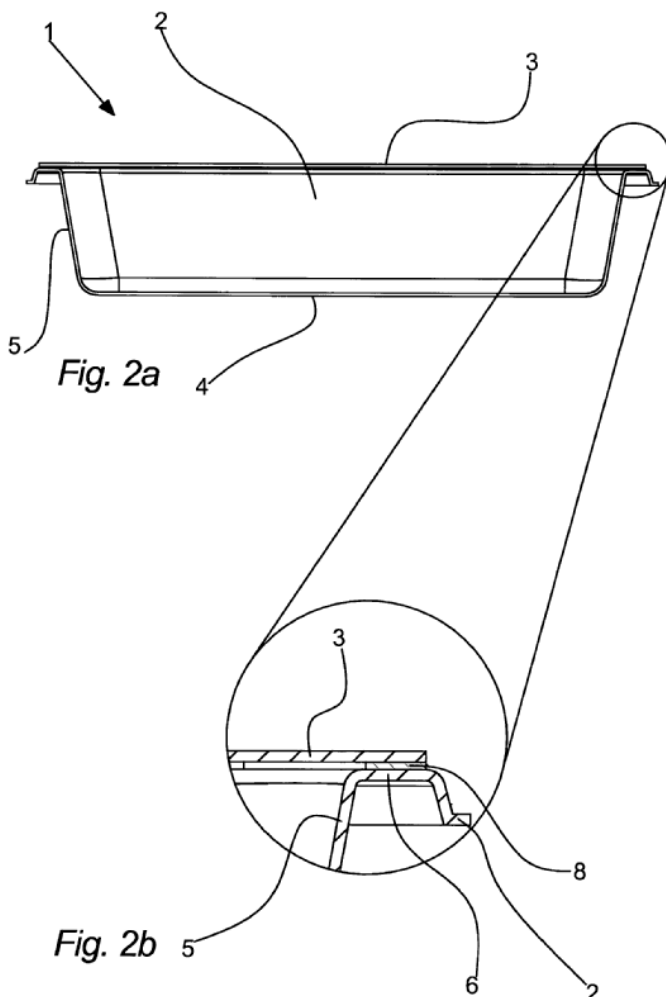
This is the ground upon which it may be inappropriate to issue an opinion where a question has already been considered pre-grant.

5. In this case, as noted above, the patentee tells me in their observations that documents D6 and D7 as referred to in the request were considered during the pre-grant process for the patent. Neither the requester nor the patentee goes into further details of the pre-grant consideration and I have not sought further details myself. I am however, satisfied that these two documents were considered previously.
6. In their observations in reply the requester argues that document D6 could be treated as an example of common general knowledge and that document D7 is combined in the request with technical background document D9 and that this constitutes a question that was not considered pre-grant and which should now be considered. In fact document D9 is offered in the request as demonstrating what is well known within the food industry, in effect common general knowledge in the art.
7. The requester offers no arguments why the decisions of the EPO in considering D6 and D7 were clearly perverse. Similarly there is no evidence why D6 or D9 in themselves should be considered as common general knowledge. D6 is simply a patent specification and there is no reason for me to suppose that it forms part of the common general knowledge in the art. I am more comfortable with the notion of D9 exemplifying common general knowledge, being as it is a monograph produced by an industry body¹. However, I have no reason to suppose that the EPO did not consider D7 and common general knowledge in the context of inventive step pre grant. I will not consider D6 and D7 in this opinion.
8. I should mention that documents D3 and D4 were also listed on the search report of the PCT application as A category or background art documents. I can see no argument in the request that relies on D3 and D4 is only offered as an example additional to D2 to show that dependent claim 14 is obvious. I will not consider D3 and D4 further.
9. I can see nothing to suggest that documents D1, D2, D5 or D8 have previously been considered.
10. However, I can find no argument in the request that makes use of D5 and I will not consider the document.
11. Machine translations into English of D1 and D2 are provided with the request. Given these seem to have been prepared long after the filing date of the patent I will not consider them. Both D1 and D2 have English language equivalents and these are referred to helpfully in the request as D1* and D2*.

¹ D9 was prepared in 2000 by the International Life Sciences Institute European Packaging Material Task Force in their report series, and is entitled Polyethylene Terephthalate (PET) for Food Packaging Applications

The patent

12. Entitled Sealed Container for Foodstuffs, the patent was filed on 25 November 2010 and made no claim to an earlier priority date. It was granted with effect from 25 May 2016 and remains in force.
13. According to the specification the invention provides containers for foodstuff that use amorphous polyethylene terephthalate (APET) as the basis (sic) material of trays as well as lids or lidding film whilst overcoming problems such as poor sealing of lids or lidding films to the rims of containers, warping of sealing rims or contamination of waste APET. This achieved by ensuring that each layer of a tray is formed from at least 85% APET and providing a layer of adhesive to an upwardly facing sealing surface on the rim of the tray, the adhesive being provided along the full circumference of the tray.
14. Figures 2a and 2b, below, show an embodiment of the invention in which a container consists of a tray 2, a lid 3 and a layer of adhesive 8 placed around the full circumference of the tray 2 on a flat upward facing surface of a sealing rim 6. The tray is thermoformed from a sheet having typically three layers of APET, the outer layers comprising some additional material making the sheet easier to roll off and the stacked trays easier to separate from each other. Crystallisation of the material of the tray is minimised such that it remains essentially amorphous.



Claim construction

15. Before considering the documents put forward in the request I will need to construe the claims of the patent following the well known authority on claim construction which is *Kirin-Amgen and others v Hoechst Marion Roussel Limited and others* [2005] RPC 9. This requires that I put a purposive construction on the claims, interpret it in the light of the description and drawings as instructed by Section 125(1) and take account of the Protocol to Article 69 of the EPC. Simply put, I must decide what a person skilled in the art would have understood the patentee to have used the language of the claim to mean.
16. Section 125(1) of the Act states that:

For the purposes of this Act an invention for a patent for which an application has been made or for which a patent has been granted shall, unless the context otherwise requires, be taken to be that specified in a claim of the specification of the application or patent, as the case may be, as interpreted by the description and any drawings contained in that specification, and the extent of the protection conferred by a patent or application for a patent shall be determined accordingly.

and the Protocol on the Interpretation of Article 69 of the EPC (which corresponds to section 125(1)) states that:

Article 69 should not be interpreted in the sense that the extent of the protection conferred by a European patent is to be understood as that defined by the strict, literal meaning of the wording used in the claims, the description and drawings being employed only for the purpose of resolving an ambiguity found in the claims. Neither should it be interpreted in the sense that the claims serve only as a guideline and that the actual protection conferred may extend to what, from a consideration of the description and drawings by a person skilled in the art, the patentee has contemplated. On the contrary, it is to be interpreted as defining a position between these extremes which combines a fair protection for the patentee with a reasonable degree of certainty for third parties.

17. Claims 1 and 18 are the only independent claims and are directed to apparatus and method aspects of the same invention. They read as follows:

1. A container (1) for foodstuff, said container comprising a tray (2) formed from a sheet of material comprising one or more layers, where the material of each of the layers of the formed tray comprises at least 85 % of amorphous polyethylene terephthalate, said tray comprising a bottom part (4), one or more side walls (5) and a peripheral sealing rim (6) at its top, said sealing rim having a substantially flat upward facing sealing surface (7), wherein, in addition to the material from which the tray is made, the sealing surface is provided with a layer of an adhesive (8) along the full circumference of the tray.

18. A method of producing a container for foodstuff, said method comprising

the steps of:

*forming a tray made from a sheet of material comprising one or more layers, where the material of each of the layers of the formed tray comprises at least 85 % of amorphous polyethylene terephthalate, said tray comprising a bottom part, one or more side walls and a peripheral sealing rim at its top, said sealing rim having a substantially flat upward facing sealing surface; and
providing the sealing surface with a layer of an adhesive along the full circumference of the tray.*

18. It seems to me that the claims are clear and require little or no interpretation. In theory the adhesive might be applied elsewhere than the sealing surface, but I can find no support for this in the application and I construe the claims as relating to a tray with a layer of adhesive applied only to its rim. For me the wording “*in addition to the material from which the tray is made*” in claim 1 also precludes the adhesive of the claims forming part of a multi-layer film from which a tray is formed.

Inventive step

19. Apart from D3, D4, D5, D6 and D7 which I have already said that I will not consider, I will deal with the prior art documents in the order they are discussing in the request.
20. To determine whether or not an invention defined in a particular claim is inventive over the prior art, I will rely on the principles established in *Pozzoli SPA v BDMO SA* [2007] EWCA Civ 588, in which the well known Windsurfing steps were reformulated:

(1)(a) Identify the notional “person skilled in the art”;
(1)(b) Identify the relevant common general knowledge of that person;
(2) Identify the inventive concept of the claim in question or if that cannot readily be done, construe it;
(3) Identify what, if any, differences exist between the matter cited as forming part of the “state of the art” and the inventive concept of the claim or the claim as construed;
(4) Viewed without any knowledge of the alleged invention as claimed, determine whether those differences constitute steps which would have been obvious to the person skilled in the art.

21. The request broadly speaking follows this reformulation.
22. I agree with the request that the notional person skilled in the art would be skilled in the manufacture and supply of containers used in the packaging, storage, transportation and/or display of a product such as a fresh food product or a medical product. The patentee does not take issue with this. I cannot see why the request refers to a medical product when the patent seems to make no mention of such products, although some of the prior art documents do. Ultimately nothing turns on the point.
23. The requester suggests that the relevant common general knowledge includes that containers of this kind are conventionally made from a plastic material, that

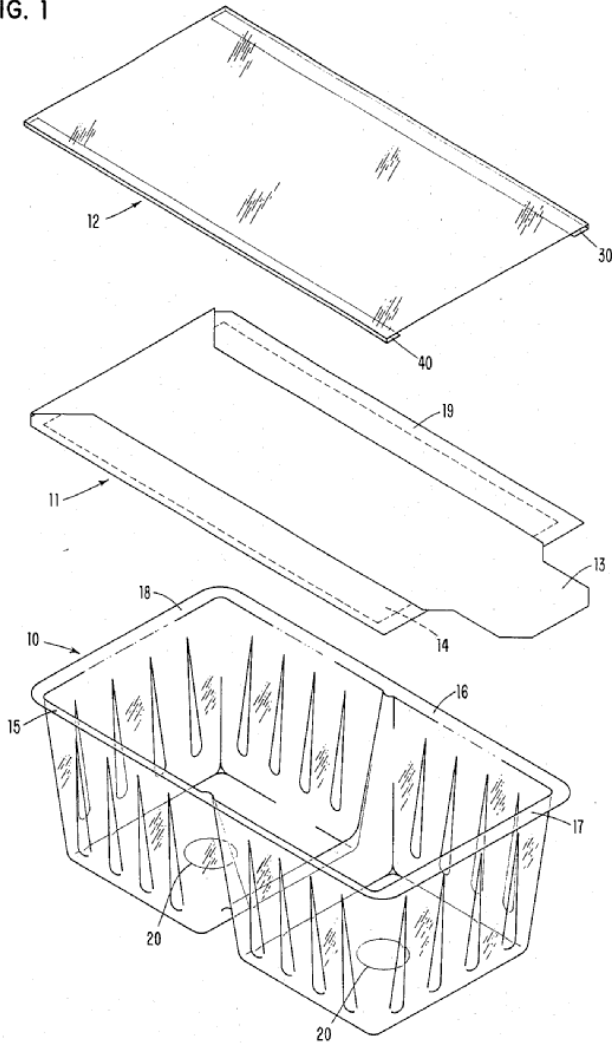
they may be sealed with a lid, that the choice of plastic material for the container and lid is dependent on the intended use of the container and that the seal may be formed in a variety of ways, such as by heat-sealing, impulse sealing, ultrasonic sealing, or by the use of a solvent or an adhesive. The request points out that the patent itself along with for example document D9 tells me that APET is a conventional material in this art. Once again the patentee takes no issue with this and nor do I.

24. Neither the requester nor the patentee offers comments on the construction of the claims and I gave my view above on their interpretation.
25. D1, WO 2009/121834, and D1*, US 2011/014404, are concerned with the use of melttable acrylate polymers for producing layers of pressure-sensitive adhesive in reclosable packs. There are no figures in D1 or D1* and, according to paragraph 0096 of D1*, in *“one preferred embodiment the container is of plastic, more particularly of a polyester, PET for example, and the container is coated with a sealable layer, polyethylene for example, at the sites to be sealed with the closure film, more particularly on the rim. The container preferably takes the form of a tray or beaker and has a bearing surface for the closure film in the regions that are to be sealed.”*. The observations from the patentee rightly note that there is no reference to forming a tray from APET in D1/D1* and the request identifies the difference between D1/D1* and the invention as being the selection of 85% APET as the material for the container. The request is silent on the question of the layer of adhesive, but elsewhere in D1* there are references to a layer of pressure sensitive adhesive (see e.g. paragraphs 0052 to 0058 in D1*). Rather than the sealable layer of polyethylene in paragraph 0096 quoted above, I take it that this layer corresponds to the layer of adhesive in claims 1 and 18 of the patent. I note that the quote from paragraph 0096 in the request omits the passage concerning the sealable layer. Even if I am wrong on this point and the sealable layer in D1/D1* should be treated as the adhesive of the patent it seems to me that the sealable layer forms one layer of a multi-layer film. From the paragraphs preceding paragraph 0096 it is clear that the pressure sensitive adhesive forms part of a multilayer closure film in the embodiment of paragraph 0096 and not part of the tray. This embodiment in D1/D1* seems to me to form a multi-layer film for a container of the kind discussed as prior art in paragraph 0008 of the patent. There are alternative embodiments in which the multi-layer film is applied as a closure to a container made from a coated plastic film and in which a container is formed from the multi-layer film which includes the pressure sensitive adhesive.
26. It seems to me that the differences between D1/D1* and the invention are the selection of 85% APET as the material for each of the layers of the tray and applying a layer of adhesive along the sealing rim of the tray. Selecting APET as one particular example of the polyester or PET identified in paragraph 0096 might not be inventive. The request includes no reason that selecting APET of relatively high purity would be obvious to the skilled person. The requester’s argument seems to be that 85% APET is simply a subset of PET. The request also suggests that the patent does not explain the benefit of 85% APET over any other arbitrary percentage. Whilst the patent does not discuss the particular benefit in 85% as the threshold value chosen in claim 1, I do not feel that the patent implies it is an arbitrary choice. I take from the discussion of contamination and the reference to

pure PET in the patent that 85% is intended to represent the maximum level of contamination within the APET that is acceptable to the invention, i.e. to allow both reliable sealing and recycling of waste material back into a production process. I have no evidence to suggest that selecting APET with a particularly high level of purity would be obvious to the skilled person, for example that such a selection was common general knowledge in the field.

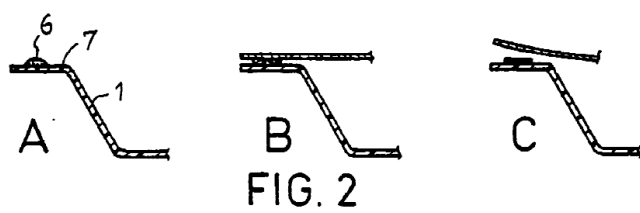
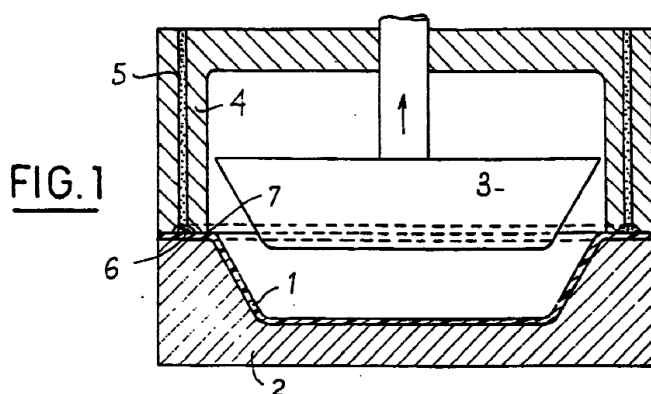
27. The material of the tray in paragraph 0096 also includes the sealable layer and I have been offered no justification for the skilled man to select 85% APET for that layer. Examples of material for the sealable layer in D1* are polyethylene, or polypropylene, or their copolymers (see paragraph 0070). I take these as being distinct materials from APET rather than APET being a subset of the materials suggested. Even if this were not the case, there remains the matter of selecting not just APET, but at least 85% APET.
28. As I noted above the adhesive in D1/D1* forms a layer within a multi-layer film rather than a layer applied to the rim of a tray. This is the case whether I take the pressure sensitive adhesive or the sealable layer of D1/D1* to correspond to the adhesive of the patent. Hence in my view it is not "*in addition to the material from which the tray is made*". The request and observations in reply offer no reason for discarding the multi-layer film and applying a separate adhesive to the rim of a tray.
29. For these reasons in my view the patent is inventive in light of D1 and D1*.
30. D8 or US4538651 in column 2 and in figure 1, below, shows a container 10 which is "*formed of polyethylene terephthalate, about 0.030 inch thick. Slide 12 is formed of polyethylene terephthalate about 0.012 inch thick. Strip 11 is a paper, cloth-like material known as TYVEK (a polyethylene fibrous sheet formed of randomly oriented, bonded polyethylene fibers, and possessing non-directional shear strength)*". Note that TYVEK is a registered trade mark. Column 2 also explains that "*The boundary of the housing's dump opening includes a continuous flange 15, 16, 17, 18 which encircles this opening. Surfaces 15, 16, 17, 18 lie in a common plane. The corresponding boundary area 19 of strip 11 is glued or otherwise sealed to flange 15, 16, 17, 18, using a releasable, peelable adhesive. An exemplary sealing process utilizes a commercially available adhesive, a pressure of 50 psi, and a temperature in the range of 230 DEG to 250 DEG F., which are maintained for from two to five seconds.*"

FIG. 1



31. The request notes that the container in D8 is not described as being for foodstuff, but that it would be suitable for foodstuff. This is the conventional construction to be placed on “for foodstuff” in claims 1 and 18. I am not convinced by the patentee’s argument that the container in D8 is not suitable for foodstuff as it contains toner. Whilst the invention claimed in D8 is indeed directed to a toner cartridge selectively containing toner, nevertheless there is a disclosure of a container that *prime facie* would be suitable for foodstuff. The request goes on to suggest that the choice of 85% APET is the inventive step, by which I presume the requester means the difference referred to in step 3 of the Pozzoli reformulation. I agree that this is the difference. As with D1/D1* above, I assume that the argument is that 85% APET is simply a subset of PET. The purity of PET or any preference for or against amorphous PET are not discussed in D8. I might agree with a suggestion that APET would be an obvious choice of PET in some circumstances given it has certain characteristics such as high transparency and oxygen impermeability, which it seems are well known. However, once again I have no evidence to suggest that selecting APET with a particularly high level of purity would be obvious to the skilled person.
32. I also believe that claims 1 and 18 of the patent are inventive in light of D8.

33. D2 or EP 0440550 A1 is a French language patent application and D2* is an equivalent granted Australian patent AU 638092B2.
34. In figures 1 and 2, below, D2* shows “a container 1 such as a dish-shaped container for sterilizable foods which is thermoformed from a multi-layer sheet (PP/adhesive/EVOH/adhesive/PP 1.2mm thick), by means of a multi-stage thermoforming mould comprising in particular a mould 2, a punch 3 and a blank holder 4. The blank holder 4 is provided with a duct 5 for supplying a thermo weldable material (Bynel (registered trade mark) of the firm Dupont de Nemours) which is injected in the form of a bead 6 onto the edge portion or flange 7 of the thermoformed container 1. This bead 6, which has a substantially parti-circular shape, will serve as a means for sealing the container 1 after the latter has been filled with a food or biological product and has been covered under pressure and in the hot state by a sheet of PET/aluminium/lacquer acting as a cover. This container is easily opened by pulling away the cover, even after treatment such as sterilization for one hour at 121 C and a thermal shock of -20 C and +40 C.”



35. D2* also describes the materials for the container more generally on pages 3 and 4:

“... the single- or multi-layer sheet employed for producing containers such as dish-shaped containers, pots, etc. , may be chosen from the thermoformable plastics materials usually employed in the food or pharmaceutical industry, in particular the singlelayer sheets based on polyolefin (e. g. polypropylene, termed PP), polystyrene or polyester, or the multi-layer sheets employing these same products ...

The peelable closure (or cover) may be composed of a single- or multi-layer sheet usually employed in the food or pharmaceutical industry, e.g. aluminium/polyolefin, PET/aluminium/lacquer, plastified paper or a single- or multi-layer plastics material as defined hereinbefore for the material of the container.

According to an embodiment of the invention, the thermoweldable material ensuring the sealing of the container is injected onto the container, in particular onto the edge portion of the latter, along one or more continuous and closed lines extending around the container and termed hereinafter beads.

...

This region depends on the choice of the material of the bead and on the choice of the material of the couple bead/container or cover support. Thus, in the usual case where the surface of the container is of polyolefin, the thermoweldable material will be chosen in particular from polyethylene, a polypropylene or their copolymers with vinyl acetate, etc.; modified by a carboxylic acid or the esters thereof, such as an acrylate or methacrylate, by an isoprene, styrene-butadiene rubber, etc. , such polymers being usually termed "adhesive" by manufacturers, for example the products named Escor of the firm Exxon, Bynel of the firm Dupont de Nemours; Orevac of the firm Ato, Admer of the firm Mitsui and Modic of the firm Mitsubishi, all of which are registered trade marks."

36. The request argues that the difference between D2* and claim 1 lies in the selection of 85% APET, that being a subset of "*the singlelayer sheets based on ... polyester*" disclosed in D2* and that the selection of 85% APET would require no inventive ingenuity. The observations from the patentee point out the disadvantages of APET as a material choice at the sterilisation temperatures envisaged in D2*. The observations also argue that the bead of adhesive shown in D2* should not be considered a layer, as required by claims 1 and 18. I am not altogether convinced by the argument that a bead could not constitute the layer of claims 1 and 18, not least because the layer is not discussed in the patent beyond a suggestion that it might be applied by roll-coating. I do take the patentee's point that APET would not be suitable for use at the temperatures envisaged in D2*. Even if this were not the case, as with D1/D1* and D8 above, I have no evidence to suggest that selecting APET with a particularly high level of purity would be obvious to the skilled person.
37. I also believe that claims 1 and 18 of the patent are inventive in light of D2 and D2*.
38. Since I feel that the independent claims of the patent are inventive in light of D1/D1*, D8 and D2/D2* there is no need for me to consider the arguments in the request regarding the dependent claims.

Opinion

39. It is my opinion that claims 1 and 18 of the patent are inventive in light of D1/D1*, D8 and D2/D2*.

Karl Whitfield
Examiner

NOTE

This opinion is not based on the outcome of fully litigated proceedings. Rather, it is based on whatever material the persons requesting the opinion and filing observations have chosen to put before the Office.