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**D E C I S I O N
of 10 May 2000**

Case Number: T 0068/98 - 3.3.3

Application Number: 88121425.8

Publication Number: 0326704

IPC: C08L 75/04

Language of the proceedings: EN

Title of invention:
Polymeric compositions

Patentee:
NORTON COMPANY

Opponent:
Henkel Teroson GmbH

Headword:
-

Relevant legal provisions:
EPC Art. 56, 114(2), 123(2), 123(3)

Keyword:
"Late submitted material (not admitted)"
"Amendments - added subject-matter (no) - broadening of claim (no)"
"Inventive step - closest state of the art - objective concept (not derivable)"

Decisions cited:
T 0150/82, T 0325/93, T 0644/97

Catchword:
-



Case Number: T 0068/98 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 10 May 2000

Appellant: Henkel Teroson GmbH
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Decision under appeal: Interlocutory decision of the Opposition Division
of the European Patent Office dated 4 November
1997 and issued in writing on 19 November 1997
concerning maintenance of European patent
No. 0 326 704 in amended form.

Composition of the Board:

Chairman: R. Young
Members: B. ter Laan
P. H. Mühlens

Summary of Facts and Submissions

- I. The mention of the grant of European patent No. 0 326 704, in respect of European patent application No. 88 121 425.8, filed on 21 December 1988 and claiming a US priority of 5 January 1988 (US 140851), with 5 claims, was published on 10 May 1995 (Bulletin 1995/19). Claim 1 read as follows:

"A polymeric foamed composition formed from a mixture comprising:

- (a) a first component which is a styrene-butadiene-styrene block polymer and is a noncross-linked elastomer that is not substantially chemically reactive with itself or with the second component (as recited below) in the presence of moisture;
- (b) a second component which is a primary polymer having isocyanate end groups that are capable of chemically reacting with each other in the presence of moisture to form a derivative polymer having a longer average chain length than said primary polymer;

which comprises intimately mixing said first and said second components, then extruding said mixture to form a foam and exposing said foam to moisture so as to become essentially thermoset."

Claims 2 to 5 were dependent claims directed to elaborations of the foamed composition according to Claim 1.

II. Notice of Opposition was filed on 9 February 1996 on the grounds of insufficiency of disclosure (Article 100(b) EPC), and lack of inventive step (Article 100(a) EPC). The opposition was supported *inter alia* by the documents:

E1: US-A-3 834 578; and

E4: D. J. Walsh, J. S. Higgins and A Maconnachie: "Polymer Blends and Mixtures", Martinus Nijhoff Publishers, Dordrecht/NL 1985, pages 196, 197, 204, 205;

as well as the later filed, but admitted:

E6: H.-G Elias: "Makromoleküle", 4. Edition, Hüthig & Wepf Verlag, Basel/CH 1981, pages 163 to 166, 739 to 740, 1014 to 1016 and 1018 to 1019;

E7: Kirk-Othmer: "Encyclopedia of Chemical Technology", 3. Edition, vol. 8, John Wiley & Sons, New York/US 1979, pages 534 to 539 and 608 to 611;

E8: W. Hoffmann: "Kautschuk-Technologie", Gentner Verlag, Stuttgart/DE, 1980, pages 112 to 113, 116 to 126 and 207 to 213;

E9: G. Habenicht: "Kleben, Grundlagen, Technologie, Anwendungen", Springer Verlag, Berlin/DE, 1986, pages 28 to 30 and 410 to 411; and

E10: S.S. Schwartz and S.H. Goodman: "Plastics Materials and Processes", Van Nostrand Reinhold Co., New York/US, 1982, pages 443 to 444.

A further document:

(A): FR-A-2 259 146

had been sought to be introduced at an even later stage of the proceedings, but was not admitted.

III. By an interlocutory decision given at the end of oral proceedings held on 4 November 1997 and issued in writing on 19 November 1997, the Opposition Division found that the patent in suit could be maintained in amended form, based on a revised Claim 1, which differed from Claim 1 as granted in that the phrase:

"...which comprises intimately mixing said first and said second components, then extruding said mixture to form a foam and exposing said foam to moisture so as to become essentially thermoset."

had been replaced by:

"...whereby the foamed composition is formed by intimately mixing said first and second components, extruding the resulting mixture and exposing said mixture to moisture to form an essentially thermoset foam.".

Claims 2 to 5 remained unchanged compared with the granted version.

According to the decision, the subject-matter of amended Claim 1 met the requirements of Article 123(2) EPC, since it was evident, even in the absence of a process limitation to exclude "essentially non-foamed products", that some foaming always occurred. Nor was

there any extension of the scope of protection, since the phrase "extruding said mixture to form a foam and exposing said foam to moisture so as to become essentially thermoset" in Claim 1 as granted did not exclude that the extrudate was also exposed to moisture prior to being a foam.

In view of the latter amendment, furthermore, the process features of Claim 1 corresponded to those in Example 25, and the objection raised under Article 100(b) EPC no longer applied.

Document (A), although mentioned in the European search report, did not disclose foaming. Consequently, it was not admitted to the proceedings, for lack of relevance.

Novelty was not in dispute.

As to inventive step, the closest state of the art was E1, which disclosed products differing from those of the patent in suit in that they contained an acrylonitrile-butadiene rubber (ABR) instead of a styrene-butadiene-styrene block copolymer (SBS). Whilst the skilled person **could** have replaced the ABR by SBS to solve the technical problem, which was to provide an alternative composition, rather than an improvement, it had not been convincingly demonstrated that SBS was the most suitable polymer for this purpose. It was more probable that the expert would have selected a polymer which was more similar in structure to ABR than SBS, i.e. a random polymer. Consequently, the subject-matter claimed in the patent in suit involved an inventive step.

IV. On 15 January 1998, a Notice of Appeal against the

above decision was filed, the prescribed fee being paid on the same day.

In the Statement of Grounds of Appeal, filed on 16 March 1998, the Appellant (Opponent) argued in substance as follows:

- (a) The objection under Article 123(2) EPC was maintained, since Claim 1 failed to recite certain process parameters which were necessary for the formation of a foamed product under the action of moisture.
- (b) It would have been obvious for the skilled person, starting from E1 and faced with the problem of providing a further foamed sealant material, to leave out the carbamate curing agents, which required a relatively high curing temperature, since foaming could be achieved, at a sufficiently high isocyanate content, in the presence of moisture.

Furthermore, it would have been obvious to replace the ABR by an SBS according to the patent in suit, since it showed that the ABR according to E1 had a high nitrile content, which was known to be associated with poor low temperature flexibility and reduced rebound elasticity (E6), poor mechanical properties, unless reinforced with carbon black or vulcanised (E7) and high conductivity, leading to unsuitability as an electrically insulating article (E8), whereas SBS rubbers were inexpensive, readily available, had excellent elastomer properties, high elasticity and tensile strength, were widely compatible with

other polymers and resins (E7, E8 and E10), and caused easy micelle formation (E4).

- (c) The previously cited document (A), now cited as its US equivalent:

E11: US-A-4 022 745

was again sought to be introduced into the procedure, since it showed that the argument that "some foaming would always occur", submitted in relation to the disclosure of the patent in suit, meant that the compositions according to E11 would also necessarily have to be regarded as foams.

- V. The Respondent (Patentee) disagreed, in submissions received on 16 July 1998 and 10 April 2000, respectively, with the arguments of the Appellant, and argued in substance as follows:

- (a) As regards the objection under Articles 123(2) and 100(b) EPC, which were interrelated (Section IV(a) above) all the compositions covered by Claim 1 of the patent in suit had some degree of porosity or foaming. Consequently, neither of these Articles was contravened.
- (b) As to inventive step, it would be necessary to combine six documents (E1, E4, E6, E7, E8 and E10) and general knowledge to arrive at something falling within Claim 1 of the patent in suit. Furthermore, it had not been shown that the skilled person would have effected the replacement of ABR by SBS from all these documents.

- (c) Document E11 should not be introduced into the proceedings, since it was evident from the details of its disclosure, in particular the presence in the compositions of large volumes of volatile solvent, that under the conditions of use it would be highly improbable that a foam would be formed. Consequently, the teaching of the document was not relevant to the issues.

The submission of 10 April 2000 was accompanied by a further set of Claims 1 to 5 forming an auxiliary request.

- VI. Oral proceedings before the Board were held on 10 May 2000. At the oral proceedings, the Appellant sought to introduce into the proceedings samples of a sliver of translucent rubbery material, unaccompanied by any written statement as to its provenance, but alleged to be a product formed according to the teaching of E11, and thus to provide evidence that the latter document disclosed foamed materials and was thus highly relevant. The Board decided, however, that the alleged evidence was late-filed, and took neither the alleged evidence nor the disclosure of E11 into consideration (Article 114(2) EPC).
- VII. The Appellant requested that the decision under appeal be set aside, and the patent in suit revoked in its entirety.

The Respondent requested that the appeal be dismissed, or, in the alternative, that the patent in suit be maintained on the basis of the claims of the auxiliary request filed on 10 April 2000.

Reasons for the Decision

1. The appeal is admissible.
2. *Admissibility of amendments*

2.1 Article 123(2) EPC

The Appellant at the oral proceedings indicated that it would no longer maintain its objection under Article 123(2) EPC to the amended Claim 1, to the extent that the Respondent continued to rely upon the passage of description of the patent in suit according to which, in the case where the thermosettable prepolymer reacts through the isocyanate group, the end product would "always have some degree of foaming..." (page 2, lines 47 to 51). The Respondent indicated that it did so, which is in any case confirmed by the retention of the relevant passage of description referred to. Nor does the Board see any reason to diverge from the finding of the decision under appeal in this respect. Consequently, the provisions of Article 123(2) EPC are held to be met.

2.2 Article 123(3) EPC.

Compared with the terms of Claim 1 of the patent in suit as granted, the definition, in Claim 1 underlying the present decision, of the steps by which the polymeric foamed composition is formed, has been broadened to the extent that there is no longer any specific requirement for "exposing said foam to moisture...".

Claim 1 as granted is, however, in the form of a "product-by-process" claim, since the polymeric foamed composition is defined as being formed by a certain sequence of steps. Such a claim, according to the established case law of the Boards of Appeal, is deemed to be directed to the product *per se*, i.e. independently of its means of production, though admittedly with all its internal characteristics and the consequences of its history of origin (T 150/82, OJ EPO, 1984, 309).

Consequently, the fact that one of the process steps has been deleted does not alter the scope of the claim, provided that there is no resulting modification of the products to which the claim is directed.

In this connection, it is evident that the final product according to both Claim 1 as granted and present Claim 1 is a thermoset foam, which is formed in each case by exposure to moisture. Furthermore, it is evident that each such foam will inevitably be "exposed to moisture", in the case in accordance with Claim 1 as granted, as the result of the explicit requirement to this effect, and in accordance with present Claim 1, as an inevitable consequence of the presence of moisture while the foam is being formed from the "mixture". It follows from this, that there is no difference, as far as the nature of the final product is concerned, between the results of the process as defined in Claim 1 as granted and those of the process according to present Claim 1. This applies equally whether some other blowing agent is used for foam formation prior to or simultaneously with the application of moisture, as was accepted by

the Appellant at the oral proceedings.

Thus, the Board is satisfied that the products covered by present Claim 1 are no different from those covered by Claim 1 as granted. Hence, the requirements of Article 123(3) EPC are met.

3. *Sufficiency of disclosure*

The objection of lack of sufficiency of disclosure which, according to the decision under appeal, had been met by the amendments made in Claim 1, was no longer pursued in the appeal and the Board sees no reason to take a different view. Consequently, the requirements of Article 100(b) EPC are held to be met.

4. *Late filed document and associated evidence*

- 4.1 Document (A), which was considered in the form of its US equivalent E11, had been disregarded by the Opposition Division, in the exercise of their discretion under Article 114(2) EPC for lack of relevance, since it was not deemed to disclose foaming (section III., above).

The argument of the Appellant, that the statement in the patent in suit according to which an end product in which the thermosettable prepolymer reacted through an isocyanate group would "always have some degree of foaming..." (page 2, lines 47 to 51), meant that the compositions disclosed in E11, which were also stated to react through an isocyanate group, would, by the same token, necessarily equally have some degree of foamed character, is not convincing

for the reasons given in the decision under appeal. Furthermore, the alleged evidence sought to be introduced by the Appellant at the oral proceedings before the Board was not available to the Opposition Division. Consequently, the Board sees no reason to regard the exercise of discretion by the Opposition Division as sufficiently unreasonable to reverse their decision to exclude the document in question from the proceedings.

- 4.2 The sliver of translucent rubbery material alleged to have been prepared according to the teaching of document (A)/E11 and sought to be introduced at the oral proceedings before the Board was late-filed evidence to which the Respondent had had no opportunity of formulating a considered reply, let alone of repeating the alleged preparation. Nor was there any apparent justification for the late filing of the alleged evidence, since the assertion that foaming would always occur had already been submitted with the Statement of Grounds of Appeal on 16 March 1998 (page 6, point 5), i.e. over two years previously, so that any such evidence could have been prepared and submitted in the earlier meantime. Even if all the statements made in connection with the samples were to be accepted at face value, however, they would not amount to evidence that foaming **must** occur according to the disclosure referred to. In other words, the alleged evidence sought to be admitted was not susceptible of showing that document (A)/E11 implicitly disclosed foamed products. Hence, there was no justification for introducing the alleged evidence into the proceedings, nor, therefore, for reconsidering the relevance of the document in its light.

- 4.3 The Board therefore decided that the alleged evidence should not be introduced into the proceedings, and that the disclosure of document (A)/E1 should remain excluded from the proceedings (Article 114(2) EPC).

5. *Novelty*

Novelty of the subject-matter claimed in the patent in suit was not contested. Nor does the Board see any reason to take a different view. Consequently, the claimed subject-matter is held to be novel.

6. *The technical problem and its solution*

The patent in suit relates to a foamed synthetic polymeric material exhibiting elastomeric behaviour and especially suitable for use as a sealant or gasket or the like (page 2, lines 3 to 5). Such a material is, however, known, for instance from E1, which, by common consent, represented the closest state of the art.

- 6.1 According to E1, the manufacture of "flowed in" gasketed or sealed closure members for containers involves machinery capable of placing annular layers of sealing compound upon the closure members at a high rate of speed. The closure member with its liquid gasket is then subjected to a heat treatment or to moisture to cure the composition, a fast-curing composition consequently being desirable (column 1, lines 5 to 16). Such a quick curing composition comprises a nitrile rubber, a polyurethane prepolymer and a carbon dioxide-blocked polyamine, i.e. a polyamine carbamate (column 2, lines 26 to 31; Claim 1).

The compositions generally contain a solvent to facilitate handling of the prepolymer by gasket-laying machinery (column 4, lines 58 to 60).

According to Example 1, a polyurethane-nitrile rubber gasket composition is prepared from the following ingredients:

Material	Parts by weight
Polyoxypropylene glycol	28.18
Hexanetriol polypropylene oxide adduct	3.31
Diethylene glycol	1.66
Nitrile rubber, 40% acrylonitrile	10.44
Calcium carbonate	27.85
Benzoyl chloride	0.51
Toluene diisocyanate	14.80
CO ₂ -blocked diethylene triamine	4.46
Toluene	5.60
Sodium bis-(tridecyl)sulphosuccinate	0.68
Hydrogenated castor oil	0.11
Organo-silicon copolymer surfactant	2.38

The nitrile rubber, calcium carbonate and benzoyl chloride were thoroughly dispersed into a dried mixture obtained by heating the three hydroxyl group containing compounds, the diisocyanate added and the resulting mixture heated to form a prepolymer having an -NCO titre of about 5% and a triol to total hydroxyl group ratio of about 0.04 (column 5, lines 21 to 47).

A suspension was prepared with a pulverised carbamate resulting from the treatment of diethylene triamine with carbon dioxide under anhydrous conditions. The

last three ingredients, i.e. surfactants and foam stabilisers, were added to the toluene and the carbamate was mixed in. The resulting dispersion was added to the prepolymer-rubber mixture to yield the final, stable curable preparation (column 5, line 48 to column 6, line 2).

According to Example 2, the gasket channel of metal pail covers were lined by means of automatic lining machinery with the polyurethane/acrylonitrile rubber gasketing compound at the rate of about 40 covers per minute per lining station. The lined covers were then passed through an oven where they were allowed to reside long enough to convert the liquid gasketing compositions to fine-celled resilient non-tacky foam (column 6, lines 6 to 15).

On testing for sealing ability (solvent leakage test), resilience of gasket (dry compression set) and resistance to various liquids (solvent extraction) the polyurethane/acrylonitrile rubber gaskets performed favourably compared with conventional styrene-butadiene rubber (SBR) gaskets (Tables II, III and IV, respectively). In particular, the exemplified gasket had a compression set, after 60% compression for 30 days at room temperature, corresponding to 97% recovery after 1 hour and complete recovery after 1 week; and, after 60% compression for 30 days at 100°F (37.78°C), a compression set corresponding to complete recovery after 1 hour as well as after one week (Table III; Gasket compound I).

6.2 It is thus evident that the gasketing composition according to E1 is applied in liquid form, in

particular as a suspension in a solvent (toluene), to form a flowed-in gasket having outstanding sealing properties, the quick curing being necessary, according to the unrefuted submission of the Respondent at the oral proceedings, to prevent unacceptable loss of shape of the applied liquid composition.

6.3 The technical problem objectively arising with reference to this disclosure is thus the search for a further foamed gasketing material having good elastomeric (sealing) behaviour, being simpler to formulate and capable of more versatile application using conventional equipment.

6.4 The solution proposed, according to Claim 1 of the patent in suit, is (a) to dispense with the carbamate curing agent and curing the composition instead by moisture; and (b) modifying the consistency of the composition to render it extrudable instead of being a liquid, by replacing the acrylonitrile rubber (ABR) component by a noncross-linked styrene-butadiene-styrene (SBS) block copolymer, thus also enabling surfactants and foam stabilisers to be omitted.

6.4.1 According to the disclosure of the patent in suit, in particular the relevant application Example 25, a composition consisting of (i) a SBS block copolymer having *inter alia* a fluidity index of 6g/10 min, as measured by ASTM D1238-65T condition "G", (ii) a polyester-polyurethane prepolymer, (iii) a paraffinic oil, (iv) a titanium dioxide pigment, (v) a finely powdered carbon dioxide filler and (vi) and (vii) small amounts of a phenolic type antioxidant and benzoyl chloride, respectively, was kneaded in a Z

blade mixer and then extruded through a screw extruder between two silicone coated polyester films and flattened to a thickness of 1 mm, the flattened extrudate then being exposed to 100% relative humidity in air for two hours, causing it to cure to form a foam (page 5, lines 1 to 35 in conjunction with page 3, lines 1 to 27 and 32 to 36). The foam had a good compression set, corresponding to full recovery at 23°C and 11.5% short of full recovery at 50°C (Table 3). According to Examples 1 to 24, further compositions were cured by submerging in boiling water for one hour, and the products tested for the amount of unextractable material by refluxing in toluene, to determine whether an interpenetrating network had been formed (page 3, line 31 to page 4, line 54; Tables 1 and 2).

6.4.2 Whilst the foamed product according to Example 25 of the patent in suit has a resilient recovery capability, termed "compression set", comparable with that of the product exemplified in E1, it is at least doubtful that this level of capability extends to all the foamed products covered by Claim 1 according to the patent in suit, firstly since no relevant data are given for the water-cured products according to Examples 1 to 24, and secondly since the term "foamed" is explicitly stated to extend to products which, although having some degree of foaming or porosity, have the properties of an essentially nonfoamed material (page 2, lines 42 to 51). This is of no consequence to the solution of the technical problem, however, since the latter does not require a particular level of "compression set" be achieved.

6.4.3 It is on the other hand evident that the product

according to Example 25 is (a) curable by moisture without the use of a polyamine carbamate curing agent; and (b) extrudable to a self-supporting shape by conventional equipment (an extruder), containing SBS as the rubber component, with no surfactants or foam stabilisers. It was not disputed that these criteria would also be fulfilled by the remaining products falling within Claim 1, including those according to Examples 1 to 24 and those referred to in the description.

- 6.4.4 Consequently, it is credible to the Board that the claimed measures provide an effective solution of the technical problem.

7. *Inventive step*

In addressing the question of inventive step, it must be borne in mind that what the skilled person would consider it obvious to do depends to a certain extent on the framework of the disclosure of the closest state of the art from which he sets out, in this case E1.

- 7.1 The emphasis in E1 is on speed of production of gaskets using specialised machinery to apply a liquid formulation, the concomitant disadvantage of "runniness" being compensated by the provision of an additional rapid curing system. In the system according to the patent in suit, however, this pattern of objectives is no longer apparent, since the composition is no longer liquid, but on the contrary is extrudable into a self-supporting shape (Example 25) and consequently has no particular need for specialised machinery to apply it, nor for an

accelerated cure once it has been applied. To this extent, it represents a reversal of the strategy inherent in the teaching of E1.

7.2 Since, furthermore, there is no derogation in E1 from the generally stated aim of using machinery capable of placing liquid sealing compound upon closure members at high speed, nor an example of any other manner of such application (column 1, lines 5 to 13; Example 2), nor any suggestion that the rapid curing system can be dispensed with, there is no intellectual "bridgehead" in the disclosure of E1 which would open the way for the skilled person to contemplate such a "reversal of strategy". In other words, the objective concept underlying the patent in suit is itself not derivable from the disclosure of E1.

7.2.1 Such a situation is somewhat analogous to that in which there is a finding that the relevant objective technical problem is not derivable from the disclosure forming the closest state of the art, since in each case any attempt by the skilled person to establish a chain of considerations leading in an obvious way to the solution of the technical problem gets stuck at an early stage (cf. T 325/93 of 11 September 1997 and T 644/97 of 22 April 1999, neither published in OJ EP0).

7.2.2 Clearly, if the objective concept is not derivable from the closest state of the art, then the means for implementing it are *a fortiori* not derivable. Consequently, such means, i.e. the modifications (a) and (b) forming the solution of the stated problem (section 6.4, above) are not obvious in the light of

this art.

- 7.3 The relevant question remaining is whether it would have been obvious to carry out the modifications (a) and (b), for some other reason.
- 7.3.1 There is no suggestion in E1 to replace the ABR component by a noncross-linked SBS block copolymer, since the use of ABR as the rubber component is an essential feature of Claim 1 of E1.
- 7.3.1.1 The argument of the Appellant at the oral proceedings, that it would be obvious to leave out the toluene in the formulation according to Example 1 of E1 in order to make it extrudable is not convincing, in view of the unchallenged submission of the Respondent during the oral proceedings, that ABR is **not** extrudable at conventional extrusion temperatures, and consequently needs to be applied in finely divided form, e.g. as a dispersion.
- 7.3.1.2 The further argument of the Appellant, that such a replacement was suggested by the comparison made in the examples of E1 between ABR rubber and a styrene-butadiene rubber (SBR) is not also convincing, firstly since the comparisons are with the polymer alone and not blended with a polyisocyanate prepolymer, and secondly since the rubber concerned is in any case not an SBS block copolymer.
- 7.3.2 As to the remaining documents in the proceedings, E4 to E10, which disclose various physical and chemical properties of ABR and SBS respectively (section IV.(b), second sentence, above) the information in such texts is disclosed merely in a

general context, and thus its potential relevance would not be apparent to the skilled person starting from E1, unless he had already hit upon the relevant objective concept. The latter, is not, however, derivable from E1 (section 7.2, above). Consequently, the potential relevance of such texts would not be apparent to the skilled person.

Analogous considerations apply to the further argument of the Appellant at the oral proceedings, that the capability of SBS of being easily extrudable, whilst maintaining its shape both before and after extrusion was "textbook knowledge".

- 7.3.2.1 If the attention of the skilled person were, nevertheless, for some reason to fall upon the disclosures referred to, their relevance is still further limited, since the properties they describe are those of the respective rubber materials themselves and not of their blends with polyurethane.

7.3.2.2 Even overlooking these aspects of lack of relevance, it is evident that, although ABR is identified in E6 as being suitable for motor seals (page 1014, fourth complete paragraph, final sentence) and in E7 as suitable for gaskets (page 535, paragraph "Resistance to Chemicals"), there is no corresponding suggestion in either of these documents, nor in any of the remaining disclosures (E4, E8, E9 or E10) that SBS would be a suitable replacement in such seals or gaskets. On the contrary, it is stated in E10, that one of the disadvantages of SBS is its poor compression set (page 444, right column, first complete paragraph). Consequently, the relevant replacement of ABR by SBS copolymer (modification (b)) is not hinted at in any of the remaining documents.

7.3.2.3 In summary, the disclosures of E4 to E10 and "textbook knowledge" do not assist the skilled person to the solution of the stated technical problem.

7.4 Consequently, the solution of the technical problem does not arise in an obvious way from the closest state of the art (E1), whether considered alone or in combination with the remaining documents in the proceedings.

7.5 Furthermore, the replacement, according to modification (b), of ABR by SBS, is on the one hand a precondition for the solution of the technical problem, since it opens the way to a composition which is extrudable rather than liquid but on the other hand is specifically excluded from the framework of the disclosure of E1 (section 7.3.1,

above). This means that, starting from E1, the formation of products having the desirable properties according to the patent in suit must be regarded as an unexpected result.

7.6 In other words, the subject-matter of Claim 1 of the patent in suit involves an inventive step (Article 56 EPC), a conclusion which by the same token applies also to the subject-matter of dependent Claims 2 to 5.

7.7 In view of the above, the main request is allowable, and it is not necessary for the Board further to consider the auxiliary request.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:

E. Görgmaier

R. Young