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D E C I S I O N
of 11 November 2005

Case Number: T 1109/03 - 3.3.03

Application Number: 98914112.2

Publication Number: 0978539

IPC: C08L 51/04, C08L 101/00, C08F 291/02

Language of the proceedings: EN

Title of invention:
Impact-resistant thermoplastic resin composition

Applicant:
Kaneka Corporation

Opponent:
-

Headword:
-

Relevant legal provisions:
EPC Art. 84, 123(2)

Keyword:
"Claims - clarity - no"
"Claims - support by the description - no"
"Amendments - added subject-matter - yes"

Decisions cited:
-

Catchword:
-

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Case Number: T 1109/03 - 3.3.03

D E C I S I O N
of the Technical Board of Appeal 3.3.03
of 11 November 2005

Appellant: KANEKA CORPORATION
2-4, Nakanoshima 3-chome
Kita-ku
Osaka-shi, Osaka 530-8288 (JP)

Representative: Vossius & Partner
Siebertstrasse 4
D-81675 München (DE)

Decision under appeal: **Decision of the Examining Division of the European Patent Office posted 21 March 2003 refusing European application No. 98914112.2 pursuant to Article 97(1) EPC.**

Composition of the Board:

Chairman: R. Young
Members: M. Gordon
C. Heath

Summary of Facts and Submissions

I. European patent application no. 98 914 112.2, filed on 21 April, 1998, claiming priority of 24 April 1997 from an earlier application in Japan (JP 1077 8297) and published on 9 February 2000 under No. 0 978 539 (Bulletin 2000/06) was refused by a decision of the Examining Division of the European Patent Office. The decision was announced at the end of Oral Proceedings, held on 19 November 2002, the written reasons being dated 21 March 2003.

The decision of the Examining Division was based on claims 1 to 12 of the application as filed.

Claim 1 read as follows:

" 1. A thermoplastic resin composition which has improved impact resistance and contains a thermoplastic resin (A) and graft copolymer particles (B) having a hollow rubber portion and graft chain in a weight ratio A/B of 2/98 to 90/10."

Dependent claims 2 to 12 related to preferred embodiments of the thermoplastic resin composition of claim 1.

II. The refusal was based on the following documents:

D1: JP 04 126 771 A (The decision being based on two abstracts thereof).

D2: US-A-4 206 290

The examining division held that the subject matter of all the claims was not novel in the light of the disclosure of D1 since D1 disclosed a composition of a thermoplastic resin and particles, said particles being obtained from a pre-formed dispersion of seed polymer particles, which could be a styrene-butadiene polymer (a rubber), onto which were polymerised crosslinkable monomers, the polymerisation of the latter monomers in the presence of the pre-formed seed particles constituting the grafting of the monomers (shell) onto a preformed polymer seed (core), thus yielding hollow particles.

At the oral proceedings held before the examining division, the applicant, without making any amendments to the claims, argued that the structure of the particles of D1 differed from those of the application in suit, and indicated that the particles of the application were hollow particles with double shell morphologies, i.e. grafted structures comprising a void encapsulated by a two-shell layered structure, which, it was argued were not disclosed in D1. The examining division did not find these arguments convincing, noting that features that were not present in the claims could not serve to distinguish the claimed subject matter from the prior art, and that the production method of D1 would in any case lead to the proposed structure.

III. An appeal against this decision was filed on 27 May 2003, the prescribed fee being paid on the same day.

Together with the statement of grounds of appeal, filed on 31 July 2003, the Appellant filed a full translation

of D1 and an amended set of 12 claims, as the sole request, the only amendment consisting in the insertion of the following phrase at the end of claim 1:

", wherein the rubber polymer of the hollow rubber portion has a glass transition temperature of not more than 0°C.". Grant of a patent on the basis of the so amended claim set was requested.

The Appellant submitted that the subject matter of the amended was novel over the disclosure of D1, particularly in the light of the requirement that the Tg of the rubber portion be not more than 0°C, whereas D1 taught that the cross-linkable polymer particles exhibited a Tg of above 100°C.

Regarding inventive step, it was submitted that the results reported in Table 1 of D1 showed that addition of the particles defined therein to ABS resin allowed a higher Izod impact resistance to be obtained than in the case of foamed ABS. The impact resistance however decreased when the added amount of particles was increased. Hence the skilled person would not expect that addition of graft copolymer particles would lead to an improvement in the impact resistance of a thermoplastic resin as set out in the application.

The application however did show an increase in impact strength of the thermoplastic resin composition as the content of the particles according to the claims was increased. This would not have been expected from the disclosure of D1.

IV. On 24 August 2005, together with the summons to oral proceedings, the Board issued a communication in which the preliminary, provisional view was expressed that there existed a number of inconsistencies, discrepancies and contradictions between the description and claims of the application, contrary to Article 84 EPC.

Regarding the newly introduced feature of the glass transition temperature of the rubber polymer of the hollow rubber portion, this introduced further ambiguities, since both the core and shell could consist of rubber, it was not clear to which part of the graft co-polymer the wording "the rubber polymer of the hollow rubber portion" pertained. The possibility that the core and shell could be identical, i.e. prepared from the same materials was considered to be in contradiction with a statement in the description that the polymers of the core and shell were different from each other. A further objection was raised regarding the Tg requirement of the shell in view of the discussion at pages 9 and 10 of the application, since it was not clear whether this applied to the entire co-polymer, the elastomeric regions thereof, or to the theoretical Tg of a homopolymer prepared from the monomer, designated "2" in the description of the application, which was stated that "mainly gives physical properties to the rubber".

Resulting from these provisionally noted deficiencies, the Board was unable to conclude that the finding of the examination division that the claimed subject matter was not distinguishable from that of D1 was incorrect.

V. Together with a letter dated 11 October 2005, the appellant submitted a revised main request and 4 auxiliary requests. The amendments according to all requests consisted in revising the definition of the hollow rubber particles, and the relationship thereto of the graft chains.

Regarding clarity, it was submitted that the structure of the rubber particle would depend on which of the various process disclosed in the application was employed. A rubber core was not mandatory, hence the reference to the "rubber polymer of the hollow rubber particles" related at least to the polymer forming the walls of the particles.

In the case of particles prepared by a method reported in the application, identified as "method (b)", in which a rubber core was employed, both the rubber core and rubber shell would be considered to be part of the rubber particle and this requirement would be understood to apply to each rubber polymer found in the particles.

Regarding the provisional opinion of the Board concerning the teachings of D1, it was disputed that there was any unambiguous evidence that the particles of D1 contained a "hollow rubber portion", since the comparatively small amount of styrene/butadiene employed made it possible that this material was distributed in discrete spots on the inside wall of the shell, but did not encapsulate a hollow shell. Even if an internal shell were formed, the Tg requirements of the amended claims would not be met.

Regarding inventive step, the submissions made in the written procedure were essentially reiterated.

VI. Oral proceedings were held before the Board on 11 November 2005.

In the course of the oral proceedings, the Appellant maintained the main request filed with the written submission of 11 October 2005 and filed 4 new auxiliary requests, replacing those submitted with the aforementioned written submission.

Claim 1 of each of the five requests (one main and four auxiliary requests) on which this decision is based thus read as follows (the differences of the claims 1 of the 1st-4th auxiliary requests compared to claim 1 of the main request are indicated by **bold** and/or ~~strikethrough~~:

Main request:

"1. A thermoplastic resin composition which has improved impact resistance and comprises: a thermoplastic resin (A) and graft copolymer particles (B) composed of a hollow rubber portion comprising hollow rubber particles and graft chains provided on the hollow rubber portion by graft-copolymerizing a vinyl monomer, wherein the volumetric proportion of the hollow part in the hollow rubber portion is from 1 to 70% by volume on the basis of the hollow rubber portion, the weight ratio A/B is 2/98 to 90/10, and the rubber polymer of the hollow rubber particles has a glass transition temperature of not more than 0°C."

First auxiliary request:

"1. A thermoplastic resin composition which has improved impact resistance and comprises: a thermoplastic resin (A) and graft copolymer particles (B) **having** a hollow rubber portion **composed of** hollow rubber particle~~s~~ and graft chains provided on the hollow rubber **particles** by graft-copolymerizing a vinyl monomer, wherein the volumetric proportion of the hollow part in the hollow rubber portion is from 1 to 70% by volume on the basis of the hollow rubber portion, the weight ratio A/B is 2/98 to 90/10, and the rubber polymer**(s)** of the hollow rubber particles has**/have** a glass transition temperature of not more than 0°C."

Second auxiliary request:

"1. A thermoplastic resin composition which has improved impact resistance and comprises: a thermoplastic resin (A) and graft copolymer particles (B) composed of a hollow rubber portion **composed of** hollow rubber particle~~s~~ and graft chains provided on the hollow rubber **particles** by graft-copolymerizing a vinyl monomer, wherein the volumetric proportion of the hollow part in the hollow rubber portion is from 1 to 70% by volume on the basis of the hollow rubber portion, the weight ratio A/B is 2/98 to 90/10, ~~and the rubber polymer of the hollow rubber particles has a glass transition temperature of not more than 0°C~~, **and the proportion of hollow rubber particle to the graft chain in parts by weight is 20/80 to 92/8**"

Third auxiliary request:

"1. A thermoplastic resin composition which has improved impact resistance and comprises: a thermoplastic resin (A) and graft copolymer particles (B) **having** a hollow rubber portion **composed of** hollow rubber particle~~s~~, **said hollow rubber particle being composed of rubber polymer particle or hard polymer particle as a core and a crosslinked rubber polymer different from the polymer of the core in physical properties of a rubber as a shell** and graft chains provided on the hollow rubber **particles** by graft-copolymerizing a vinyl monomer, wherein the volumetric proportion of the hollow part in the hollow rubber portion is from 1 to 70% by volume on the basis of the hollow rubber portion, the weight ratio A/B is 2/98 to 90/10, and the rubber polymer of the **shell of the** hollow rubber particles has a glass transition temperature of not more than 0°C."

Fourth auxiliary request:

"1. A thermoplastic resin composition which has improved impact resistance and comprises: a thermoplastic resin (A) and graft copolymer particles (B) **having** a hollow rubber portion **composed of** rubber particle~~s~~, **said hollow rubber particle being composed of rubber polymer particle or hard polymer particle as a core and a crosslinked rubber polymer different from the polymer of the core in physical properties of a rubber as a shell** and graft chains provided on the hollow rubber **particles** by graft-copolymerizing a vinyl monomer, wherein the volumetric proportion of the hollow part in the hollow rubber portion is from 1 to

70% by volume on the basis of the hollow rubber portion, the weight ratio A/B is 2/98 to 90/10, and the rubber polymer**s** of the hollow rubber particles ha**ve** a glass transition temperature of not more than 0°C."

(a) The Appellant submitted that the claim 1 of each request respectively were intended to encompass two embodiments one of which was a hollow rubber particle, in which case, the terms "portion" and "particle" as employed in the claims would be synonymous. The other alternative - covered by those examples in which an acid latex "S" was employed to enlarge the particles - resulted in agglomerates of the hollow particles, within a solid rubber portion ("skin") derived from the latex "S", and that in this case the "hollowness" of the "portion" resulted from the presence there within of hollow primary particles. It was emphasised that a core particle within the hollow particles was not necessary - this was simply one of the possible morphologies.

(b) Regarding the location and number of graft chains, it was submitted that the purpose of the graft chains was to disperse the particles, and that a single chain would be insufficient to perform this function. Both the single particles and the agglomerates would have the graft, hence the term "particle" as employed in the auxiliary requests was to be understood as applying to both possibilities insofar as the graft chains were concerned thus providing a basis for the presence of graft chains on the agglomerates. Accordingly despite certain inconsistencies within the

application, namely the disclosure of graft chain (in the singular) on the portion at page 5, line 5 to 6 of the description and claim 1 as originally filed, and a reference to graft chains (plural) on the particles at page 12, lines 16 and 17 of the description as originally filed, the skilled reader would recognise that a plurality of chains was necessary in order to fulfil the aim of dispersing the particles. The disclosure of page 12 would also confirm that both the primary (non-agglomerated) particles and the rubber portion of the agglomerated particles exhibited the grafts, if it were accepted that the term "particle" applied to both the agglomerated and non-agglomerated embodiments.

(c) With regard to the calculation of the void volume the specified range of 1-70% by volume applied to particles of both types and was not restricted to those prepared by method (b). Regarding the two different types of particles (agglomerated and non-agglomerated) it was submitted that all particles present had to be taken into account in calculating the void volume.

(d) It was submitted that although, as stated at page 9, lines 8 and 9 the polymers of the core and the shell differed in physical properties, it would be understood, in particular in view of the reference to Tg at page 7, lines 13 to 17 that this distinction did not apply to the Tg. In particular according to the disclosure of page 7, the Tg requirement applied to the hollow rubber particles as a whole, meaning that the correct

interpretation was that all rubbers present had a Tg in the range required. Even in the case that the two polymers differed in Tg, this did not mean that the polymer of the core would have a Tg above 0°C.

It was also submitted that the wording could include the rubber of the core, although this did not inevitably have to have the Tg in this range. It was essential only that the hollow rubber part exhibited this Tg. However the correct interpretation of the claim would be to include the Tg of the core in the calculation and definition of the Tg such that if the polymer of the core had a Tg above 0°C then the particle would lie outside the scope of the claim. Since this corresponded to the intended interpretation of the description and claims, it should be accepted by the board. Only two possibilities existed - either all the rubber polymers of the particle exhibited this feature, or only the polymer forming the shell did. Further this restriction applied to all types of particles and was not limited to particles made by method (b). Accordingly, the first, third and fourth auxiliary requests were formulated to reflect these possibilities.

(e) With regard to the deletion of the specification of the Tg from claim 1 of the second auxiliary request, it was submitted that since this feature merely quantified a feature inherent to the claim by the employment of the term "rubber", it was possible and appropriate to delete this. The feature had been put into the claim as it had been

held to be the most appropriate and clear manner to distinguish the claimed subject matter from the cited prior art. The claims of the second auxiliary request (without this feature) were prima facie patentable and hence the request should be admitted.

VII. The appellant requested:

– That the decision under appeal be set aside and that a patent be granted on the basis of the following:

1. Main request as filed on 11 October 2005, in the alternative

2. Revised first auxiliary request filed at the oral proceedings, in the alternative

3. Revised second auxiliary request filed at the oral proceedings, in the alternative

4. Revised third auxiliary request filed at the oral proceedings, in the alternative

5. Revised fourth auxiliary request filed at the oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

2. *Main request*

2.1 *Article 123(2) EPC*

The features defined in claim 1 of the main request are derived from originally filed claim 1, page 3, line 23, claim 3 (volumetric proportion of the hollow part) and page 7, lines 13 to 17 (glass transition temperature).

Regarding the feature "graft chain**s** provided on the hollow rubber **portion"** (emphasis added), the following is noted. Claim 1 as originally filed did not specify the location of the graft chain (singular). According to page 5, line 6, there is present "graft chain" (singular) grafting on the hollow rubber portion. The use of the singular "chain" does not provide a basis for the amendment to the plural "chains". A further related disclosure is provided at page 12, lines 16 and 17 in which it is stated that graft chains (plural) are provided on the hollow rubber **particles.** While this disclosure does refer to chains (in the plural), these chains are stated to be located on the particles, not on the portion. The question of whether the feature of claim 1 that plural chains are present on the rubber **portion** meets the requirements of Article 123(2) EPC depends on the meaning of the terms "portion" and "particles" and relation between these. This is a matter falling under the terms of Article 84 EPC and is discussed in the following paragraph.

2.2 *Article 84 EPC*

2.2.1 As submitted by the Appellant (see paragraph VI.a above) the wording of claim 1 of the main request is intended to encompass two embodiments. In this respect, it is noted that the application employs two differing descriptions of the particles. According to page 3, line 13, the application relates to graft polymer particles (plural) **having** a hollow rubber portion, whereas page 5, lines 5 to 6 states that the graft copolymer particle is **composed** of a hollow rubber portion which, according to page 5, line 7 is itself composed of hollow rubber particle (singular). According to the first definition (page 3, line 13), the "particles" and the "portion" are synonymous, i.e. the rubber portion is provided by the particles. However according to the second definition (page 5, lines 5 to 6), it is implied that the rubber "portion" has a hollowness separate to and distinct from that of the "particles". In this second case, the "portion" and "particles" would thus appear to be distinguished from each other.

From the examples it is apparent that two methods are adopted to form the graft copolymer particles.

Common to both is a stage of forming a latex of core particles (the series of experiments with the prefix "I"), and a subsequent step in which this latex of core particles is dispersed in a mixture of monomers, including a crosslinkable monomer to provide hollow rubber particles (shown in the examples II-1 to II-3). In one variation these particles are then subjected to

a grafting reaction (experiments III-1, III-2, III-3, III-8, III-9).

The particles resulting from these experiments would correspond to the first morphology defined above, i.e. wherein the "hollow rubber portion" and "graft polymer particles" are synonymous.

In a variation of this process (examples II-4 to II-7), a step of "enlargement" employing an acidic rubber latex "S" is undertaken, either on particles from the II-series alone, or on a combination of particles from the II-series and particles from the I-series (core particles). In these examples, the resulting particles will, in contrast to those discussed above, be agglomerates wherein the polymer resulting from Latex S forms a rubber skin or encapsulation around a plurality of the first formed particles (of the II-series and in some cases also from the I-series). As can be derived from the results of (comparative) examples II-8 and II-9 in which the Latex S is blended and polymerised in the presence of core particles from the I series upon which the shell has not been formed, the products resulting from polymerisation of latex S have a void volume of 0, i.e. are solid.

Accordingly, in the case of these agglomerated particles, there would also be a rubber portion - that derived from the latex S, however this rubber portion would itself not be hollow.

The conclusions that can be drawn are the following:

While there is a single claim employing a single definition, in fact the claim represents an attempt to cover two different and distinct subject matters by this single formulation, neither of which subject matters is in fact fully compatible with the definition given.

As far as the first structure (non-agglomerated) is concerned, the explanations proffered by the Appellant are inconsistent with the wording of claim 1, since claim 1 requires that the hollow rubber portion comprises a plurality of hollow rubber particles, whereas according to the Appellant in fact the hollow rubber portion **is** the particle, i.e. there is a single particle. Hence the claim fails to define clearly this embodiment and for this reason lacks clarity, contrary to Article 84 EPC.

Regarding the second proposed interpretation relating to agglomerates, there is an inconsistency within the claim since it is apparent from the evidence of the comparative examples referred to above, that the "hollow rubber portion" of the agglomerated particle, as opposed to any constituent parts thereof, will not be hollow. There is a further inconsistency with the description at page 5, lines 7 to 8 which states that the hollow rubber portion is composed of hollow rubber particle (singular), whereas the arguments of the Appellant and the examples of the application indicate that what is intended is an agglomerate of a plurality of particles.

Accordingly, it is concluded that as far as the definition of the structure of the particles is concerned, claim 1 of the main request does not meet the requirements of Article 84 EPC.

2.2.2 The definition of the presence of graft chains on the hollow rubber portion can be clear in the sense of Article 84 EPC only insofar as it is understood upon which substrate the grafts are made. Since, as explained in paragraph 2.2.1 the nature and constitution of the particles is the object of a clarity objection the feature relating to the location of the grafts, being dependent upon the structure of the particles being clearly defined, must by necessity also lack clarity.

2.2.3 The information relating to the void volume in the description is inconsistent. According to page 3, lines 19 to 23, the void volume is based on the volumetric proportion of hollow part in the hollow rubber portion of the graft polymer particles, and is 1-70 % by volume on the basis of the hollow rubber portion. However according to page 12, lines 6 to 11 the void volume is related to the hollow part in the hollow rubber particle. While the latter definition appears clearly to relate to the non-enlarged (non-agglomerated) particles, and so is clear, the definition given at page 3 is less easily susceptible to comprehension. Firstly, it is not known what constitutes the "hollow part in the hollow rubber portion". Two interpretations are possible. One is the void volume of the total agglomerate. An alternative interpretation would be to consider only the region enclosed by the rubber shell of the primary hollow particles (i.e. those being the

direct result of the series II examples discussed above). These alternatives would yield highly differing results since in the first method, a much higher amount of polymer, i.e. the "skin" of the agglomerate would be considered, leading to a significantly lower calculated void volume than the second method.

Accordingly, it is concluded that the feature of the void volume as defined in claim 1 of the main request is lacking clarity insofar as agglomerated particles are concerned.

2.2.4 The final feature of claim 1 is that "the rubber polymer of the hollow rubber particles has a glass transition temperature of not more than 0°C". Firstly, while the claim employs the definite article, there is in fact no antecedent for this, so that it is impossible to understand the identity of **the** rubber polymer to which reference is being made. According to the description, the particles mandatorily have a rubber shell. However, according to the preferred method (b) for preparing the particles, the core may also be a rubber. Further, as discussed in paragraph 2.2.1, in the sub-embodiment of method (b), exemplified in examples II-4 to II-7, which gives rise to agglomerates there will be a number of "rubbers" present, namely:

- the rubber of the core particle
- the rubber of the first shell
- the rubber of the enlarged shell (provided by latex S).

Accordingly while the claim specifies the Tg of **the** (emphasis added) rubber polymer of the hollow rubber particles, it is apparent that the particles may contain rubber in up to three locations. According to page 9, lines 7 to 9 of the description, the rubber forming the shell is different from the rubber of the core in physical properties, Tg being such a physical property. Hence the particles may contain a plurality of different rubber components, meaning that, contrary to the wording of the claim, there will not inevitably be a single rubber present, and hence there will not inevitably be a single Tg, but there may be a plurality of Tgs, corresponding to the different rubbers present. Neither the claim, nor the description renders it possible to understand whether "the" Tg relates to a specific one of the rubber components, all of them or any (i.e. at least one) of them. Accordingly it is impossible clearly and unambiguously to understand the scope of this claim.

The arguments of the Appellant (section VI.d above) that while the core and shell are distinguished, this distinction does not extend to the Tg, and that this absence of any distinction arises from the discussion at page 7, lines 13 to 17 is not supported by any statement in the application. Further, the submission that if a plurality of rubber components were present, it would be sufficient for compliance with the claims that any rubber have the Tg, and the submission that in order to have different physical properties it may be possible to have a difference in Tg would appear to confirm the unclarity inherent in the definition of this feature. It is also to be emphasised that there is

no disclosure in the description which can serve to resolve this ambiguity.

The further argument of the Appellant (section VI.d) that the interpretation put forward during the Oral Proceedings before the Board corresponded to the intended meaning of the claims and hence should be accepted by the Board is inconsistent with Article 84 EPC which requires that the claims shall be clear. This argument is also inconsistent with Article 123(2) EPC since it in effect implies introducing into the application information which was not originally disclosed. Accordingly, this argument of the Appellant cannot succeed.

2.3 It is therefore concluded that:

- The feature that graft chain**s** are provided on the hollow rubber portion is not disclosed in the application as filed, contrary to Article 123(2) EPC (paragraph 3.2.2);

- Claim 1 does not meet the requirements of Article 84 EPC due to the deficiencies noted in the definition of:

- the structure of the hollow particles;
- the void volume and
- the Tg.

2.4 Accordingly, it is concluded that claim 1 of the main request does not meet the requirements of Articles 84 and 123(2) EPC and is not admissible.

3. *First auxiliary request*

3.1 *Article 123(2)*

Compared to claim 1 of the main request, claim 1 of the first auxiliary request specifies that present are graft copolymer particles **having** a hollow rubber portion which is **composed of** hollow rubber particle (singular) with graft chains provided on the hollow particles. Additionally, in the definition of the Tg, both the singular and plural alternatives are explicitly mentioned.

3.2 In relation to the Tg, Claim 1 of the first auxiliary request explicitly defines the two possibilities indicated by the appellant and discussed above in paragraph 2.2.4. However, precisely because, as explained above, the application as originally filed is ambiguous in this respect and fails to disclose explicitly these two alternatives, the definition thereof in claim 1 of the first auxiliary request constitutes subject matter extending beyond the content of the application as filed.

Accordingly claim 1 of the first auxiliary request does not meet the requirements of Article 123(2) EPC.

4. *Third auxiliary request*

Claim 1 of this request specifies that the Tg requirement is to be met by the rubber polymer of the shell of the hollow rubber particles. However, as noted above, this information, is not directly and unambiguously derivable from the application as filed.

Accordingly, and similarly to the situation in respect of the first auxiliary request, this feature constitutes subject matter extending beyond the content of the application as filed.

Thus claim 1 of the third auxiliary request does not meet the requirements of Article 123(2) EPC.

5. *Fourth auxiliary request*

According to claim 1 of the fourth auxiliary request, all rubber polymers of the hollow rubber particles are to exhibit the required Tg.

Analogously to the reasons indicated in respect of the third auxiliary request, this definition constitutes subject matter extending beyond the content of the application as filed. Accordingly, this request does not meet the requirements of Article 123(2) EPC.

6. *Admissibility of the second auxiliary request*

Claim 1 of the second auxiliary request differs from claim 1 which was submitted together with the statement of grounds of appeal inter alia in deletion of the feature "the rubber polymer of the hollow rubber particles has a glass transition temperature of not more than 0°C".

In the statement of grounds of appeal, the Appellant had submitted that this feature, which was not in claim 1 on which the decision was based, had been introduced in order to establish a distinction over the disclosure of D1.

In the communication of 24 August 2005, the Board made the Appellant aware of a number of concerns in relation to the clarity of this feature, with the consequence that it could not be concluded that the grounds of the decision under appeal had necessarily been overcome by introduction of this feature.

Despite this clear indication in the communication, this feature was retained in the amended sets of claims according to the main and 1st-4th auxiliary requests submitted with the letter of 11 October 2005 in preparation for the oral proceedings. It was only at the oral proceedings that the Appellant proposed to delete this feature from the claims of one of the requests.

This deletion, far from potentially advancing the prosecution of the case in a convergent manner, resulted in reversion to the status forming the basis of the considerations of the examining division, i.e. earlier than that at the outset of the appeal proceedings. Further, deletion of this feature was inconsistent with the position taken by the appellant both in the statement of grounds of appeal and in the submission of 11 October 2005, in both cases reliance having been placed on the Tg to establish a distinction over the prior art D1.

Accordingly, the deletion of the Tg at the oral proceedings before the board constituted a material change in the case presented by the Appellant, inconsistent with and divergent from the arguments advanced in the appeal procedure up to that point.

According to Article 10(b)(1) of the Rules of Procedure of the Boards of Appeal in the version applicable as from May 2003, admission of a change to an Appellants case is a matter for discretion by the Board. In exercising said discretion, the current state of the proceedings and the need for procedural economy must be taken into consideration.

As is apparent from the foregoing, this amendment was presented at a very late stage of the proceedings, in fact well into the oral proceedings. Further, the consequence of admitting this amendment would have been to bring the proceedings back to a far earlier stage, predating even the filing of the appeal.

Accordingly, the Board elected, in exercise of the discretion permitted, not to admit this change to the appellants case.

Order

For these reasons it is decided that:

The appeal is dismissed.

The Registrar: The Chairman:

E. Görgmaier R. Young