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DECISION
of 21 September 2004

Case Number: T 0868/02 - 3.3.3

Application Number: 94201636.1

Publication Number: 0629658

IPC: C08L 25/02

Language of the proceedings: EN

Title of invention:

Rubber-reinforced vinyl aromatic (co)polymer

Patentee:

ENICHEM S.p.A.

Opponent:

THE DOW CHEMICAL COMPANY

Headword:

-

Relevant legal provisions:

EPC Art. 54, 123(3)

Keyword:

"Extension of protection (no) - deletion of disclaimer (yes)"
"Novelty (no) - selection criteria not met"
"Late request - not admitted"

Decisions cited:

G 0001/93, G 0001/03, T 0198/84, T 0472/88, T 0279/89,
T 0012/90, T 0651/91

Catchword:

-



Case Number: T 0868/02 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 21 September 2004

Appellant: THE DOW CHEMICAL COMPANY
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Decision under appeal: Interlocutory decision of the Opposition
Division of the European Patent Office
announced orally on 28 May 2002 and issued in
writing on 17 June 2002 concerning maintenance
of European patent No. 0629658 in amended form.

Composition of the Board:

Chairman: R. Young
Members: P. Kitzmantel
A. Pignatelli

Summary of Facts and Submissions

I. Mention of the grant of European patent No. 0 629 658 in respect of European patent application No. 94 201 636.1 in the name of ENICHEM S.p.A., which had been filed on 8 June 1994 claiming an IT priority of 16 June 1993, was announced on 22 September 1999 on the basis of 19 claims, independent Claims 1 and 18 reading as follows:

"1. A rubber-reinforced vinyl aromatic (co)polymer consisting essentially of a polymeric matrix and a rubber phase dispersed and/or grafted within the polymeric matrix, wherein said rubber phase consists of a mixture of i) 20-80 wt.% of a diene rubber and ii) 80-20 wt.% of a vinyl aromatic monomer/conjugated 1,3-diene linear block copolymer, said block copolymer having a diene content exceeding 80 wt% and, respectively, a vinyl aromatic monomer content of less than 20 wt%, with the proviso that the content of peroxy oxygen-containing material in the blend is less than 0.25 grammillimoles per 100 grams of total rubber present in the blend."

"18. A process for producing the rubber-reinforced vinyl aromatic copolymer in accordance with any one of the preceding claims, consisting of dissolving the mixture of diene rubber i) and block copolymer ii) in the monomer or monomers, possibly in the presence of an inert solvent in a quantity which can vary from 5 to 100 wt% on the mixture, then subjecting the resultant solution to polymerization, in the presence of an initiator, in two or more agitated vertical tubular plug flow reactors arranged in series, their

length/diameter ratio exceeding 2 and, preferably, being between 3 and 10."

Claims 2 to 17 were dependent on Claim 1, Claim 19 was dependent on Claim 18.

Notice of Opposition requesting revocation of the patent in its entirety on the grounds of Article 100(a) and (b) EPC was filed by The Dow Chemical Company on 21 June 2000. With its letter dated 18 February 2002 the Opponent raised an additional ground of opposition under Article 100(c) EPC.

The opposition was *inter alia* based on documents

D1: US-A-4 524 180 and

E2: US-A-3 497 572 (cited outside the opposition period).

II. In its interlocutory decision announced orally on 28 May 2002 and issued in writing on 17 June 2002, the Opposition Division found that the patent in the form as amended according to the "second auxiliary request" met the requirements of the EPC.

This decision relates to three requests,

(a) a main request, originally submitted as "auxiliary request" with the Patentee's letter dated 24 April 2002, acquiring the status of a main request by the Patentee's abandoning of the granted version considered to contravene Article 123(2) EPC, a conclusion drawn by the Opposition Division after

its admission at the oral proceedings on 28 May 2002 of the late filed ground of opposition under Article 100(c) EPC; Claim 1 of this request differing from its granted version by deletion of the disclaimer (proviso); and

- (b) two requests submitted by the Patentee at the oral proceedings as "first" and "second auxiliary requests", their Claims 1 differing from the version of the afore-mentioned main request by the following amended definitions of the diene rubber i): "wherein the diene rubber is synthetic and consists of a conjugated 1,3-diene polymer containing from 4 to 6 carbon atoms" ("first auxiliary request") and "wherein the diene rubber is polybutadiene" ("second auxiliary request"), respectively.

III. The reasons of the Opposition Division's decision may be summarised as follows:

- (a) Claim 1 of the main request met the requirements of Article 123(2) and (3) EPC because
 - (i) it no longer contained the disclaimer of granted Claim 1, which, in contravention of Article 123(2) EPC, was supported neither by the application as filed nor by document E2, and
 - (ii) given the lacking technical contribution of the disclaimer, its deletion did not, in accordance with the finding of G 1/93 (OJ EPO 1994, 541), extend the protection conferred by the granted patent.

- (b) While the subject-matter of this request furthermore fulfilled the requirements of Article 83 EPC, it was not novel over document E2 which disclosed a blend having all features of Claim 1 of this request.

- (c) By the same token the subject-matter of the "first auxiliary request" lacked novelty because in the light of the description of the opposed patent - which could not be amended without contravention of Article 123(2) EPC - the amended diene rubber definition of this request still comprised copolymers of conjugated diene and acrylonitrile.

- (d) Claim 1 of the "second auxiliary request" was held to meet the requirements of Article 123(2) and (3) as well as those of Article 54 EPC.

- (e) Its subject-matter was furthermore considered non-obvious over the closest prior art according to D1 because the better optical properties obtained by the selected weight ratio (diene rubber):(vinyl aromatic monomer) of the "inventive" block copolymer was not to be expected. In the Opposition Division's view, this improvement was established by the higher gloss value of 80 achieved according to Example 3 of the patent in suit as compared to the gloss value of 60 of the comparative Example (using a block copolymer according to the state of the art) submitted in Vilma Fornasari's Declaration before the USPTO dated 2 October 1995 (attached to the Applicant's letter dated 28 March 1997; hereinafter "Fornasari Declaration"); conflicting data of the Opponent

(experimental reports of Mr Bouquet dated 20 June 2000 (Bouquet I) and submitted with the Opponent's submission dated 18 February 2002 (Bouquet II)) were disregarded because they had been derived, in the Opposition Division's view, from experiments using rubbers "which do not fully correspond to the rubber used in the examples of the opposed patent as well as in the Fornasari's test and in the examples of D1" (Reasons 7).

IV. On 19 August 2002 the Opponent (Appellant) lodged an appeal against the decision of the Opposition Division. The appeal fee was paid on 13 August 2002. The Statement of Grounds of Appeal was filed on 16 October 2002. A further written submission dates from 26 July 2004.

V. The arguments of the Opponent Appellant presented in the written submissions and at the oral proceedings held on 21 September 2004 may be summarized as follows:

(a) The deletion of the disclaimer "that the content of peroxy oxygen-containing material in the blend is less than 0.25 grammillimoles per 100 grams of total rubber present in the blend" from granted Claim 1 contravened Article 123(3) EPC because the patent in suit was devoid of any information permitting the conclusion that the disclaimer did not provide a technical contribution.

(b) That the disclaimer indeed provided a technical contribution was furthermore conspicuous by the novelty establishing purpose of its introduction during examination, a conclusion furthermore

supported by G 1/93 (Reasons 16) according to which a limiting feature creating an inventive selection, as was the case here, was a typical example for a feature providing a technical contribution.

- (c) It was by no means justified to take it for granted that, owing to the term "consisting essentially of", Claim 1 in the absence of the disclaimer excluded compositions having a content of peroxy oxygen-containing material higher than that permitted by the disclaimer.

The scope of this term was all but clear, not only with regard to the possible presence of additives, like antioxidants (used in all Examples) and mineral oil (used according to Example 5, now deleted, but still an option), but also with regard to the use of comonomers not specified in Claim 1 but envisaged in the description (paragraphs [0032] and [0033] of the specification).

- (d) Furthermore, whilst it was admitted that the peroxide initiator used in the "inventive" experiments was completely consumed in the course of the polymerisation reaction, this would not rule out the subsequent addition of peroxide initiator as done according to Example 1 of document E2.
- (e) After having been made aware by the Board that according to G 1/03 (OJ EPO 2004, 413, Reasons 2.5.2) the non-achievement of a desired effect

which is not expressed in a claim is not a ground of insufficiency the Appellant refrained from further comments on this issue at the oral proceedings. In its written submissions the Appellant had argued that the non-attainment of the desired gloss improvement demonstrated by Bouquet I and II established that the opposed patent lacked sufficiency under Article 83 EPC.

(f) D1 was novelty destroying for the claimed subject-matter because:

- (i) the alleged substantial absence of peroxy oxygen-containing material from the claimed compositions was undistinguishing: also according to D1 the residual amount of the peroxide initiator was immeasurably low;
- (ii) the weight ratio ranges of diene rubber (10% to 95%) and block copolymer (5% to 95%) disclosed in D1 did not justify a recognition of novelty by "selection" of the respective "inventive" ranges (20% to 80%/80% to 20%) because not only were the latter fully within said generic prior art ranges but moreover the butadiene/block copolymer ratios exemplified in D1 (Examples 3 and 6: 50/50; Example 8: 75/25) fell squarely within said "inventive" ranges;
- (iii) the only feature not *prima facie* clearly disclosed in D1 was the butadiene content of the block copolymer of from >80% to <100% as compared with 50% to 95% according to D1.

Considering however that (i) the overlapping area of from >80% to 95% represented one third of D1's range of 50% to 95%, (ii) that the lower limit of >80% directly abutted D1's preferred range of 65% to 80%, (iii) that the block copolymer Solprene®308 exemplified in D1 had a butadiene content of 70%, ie only 10% away from the "inventive" lower limit, and (iv) that it was established by the experimental reports Bouquet I and II that the choice of the "selected" range did not provide the desired effect of an improved gloss, the conclusion must be drawn that said "inventive" range satisfied none of the three criteria for the novelty of a selection set out in T 198/84 (OJ EPO 1985, 209) and T 279/89 of 3 July 1991 (not published in the OJ EPO).

(iv) Since block copolymers comprising ethylenically unsaturated nitrile monomer units instead of or together with monovinylidene aromatic monomers, an embodiment formally within D1's disclosure, had not been commercially available, this alternative did in practice not exist and the use of block copolymers from diene and (only) monovinylidene aromatic monomers did not therefore require any choice in that respect.

(g) Furthermore the claimed invention lacked an inventive step over D1 which was concerned with

the same technical problem of providing a good balance of physical properties and gloss. Since it was shown by Bouquet I and II that the use of a block copolymer having a diene content >80% by weight did not give rise to better gloss than the use of a block copolymer having a butadiene content of 70% as exemplified in D1, and since block copolymers having a butadiene content of 90% were commercially available, their use did not require any inventivity.

- (h) The Appellant objected to admitting a set of claims of a "first auxiliary request" into the appeal proceedings which was submitted by the Respondent at a point in time well into the oral proceedings because, in the face of the essentially unchanged factual situation since the filing of the opposition, there was no excuse for the lateness of this request whose admission would disadvantage the Appellant. Moreover the suggested amendment could not be seen to be related to the critical aspects of the selection invention issue and it would require intensive investigations of the Appellant to find out whether the features newly introduced into Claim 1 of this "first auxiliary request" were or were not part of the disclosure of the applicable citations.

VI. The arguments of the Respondent Patentee submitted in its letters dated 28 February 2003 and 2 August 2004 as well as at the oral proceedings may be summarised as follows:

- (a) The deletion from granted Claim 1 of the disclaimer did not contravene Article 123(3) EPC because it did not provide a technical contribution. Contrary to the Appellant's contention, the disclaimer had not been introduced during examination for restoring novelty but only in order to clarify the meaning of the term "consisting essentially of".
- (b) Also after deletion of the disclaimer the presence of amounts of peroxy oxygen-containing material affecting the essential characteristics of the composition remained excluded because, in conformity with the jurisprudence of the EPO (cf. T 472/88 of 10 October 1990, not published in the OJ EPO), this was guaranteed by the term "consisting essentially of".
The absence of peroxide from the composition was also confirmed by the statement in E2 (column 5, lines 65 to 69) that "substantially complete decomposition of the peroxide occurs during the preparation of the composition".
- (c) The Appellant's objection against the sufficiency of the disclosure of the opposed patent was inconclusive in view of its successful preparation of compositions in accordance with the disclosure of the patent.
- (d) The subject-matter of the opposed patent was novel over D1 because this document did not unambiguously disclose all characteristics of the claimed compositions in the specified combinations.

In particular, it did not disclose that the amount of block copolymer in the rubber phase in the composition should be 20% to 80% by weight and that its butadiene content should be >80% by weight. Rather D1 only disclosed generic ranges: 10% to 95% by weight of polybutadiene in the rubber phase and 50% to 95% by weight of butadiene in the block copolymer.

It was therefore necessary for the skilled person to perform two choices from this generic disclosure, a situation which according to T 651/91 of 18 February 1993 (not published in the OJ EPO) established novelty.

- (e) The Appellant's approach first to consider the novelty aspect of the feature concerning the amount of polybutadiene in the rubber phase and thereafter, separately, the novelty aspect of the diene content of the block copolymer was wrong. Rather these features had to be considered in combination.

- (f) But even if the Appellant's approach was followed, novelty by selection of the diene content of >80% by weight must be acknowledged because this feature met the selection criteria defined in T 198/84 and T 279/89: given that the purposive character of this feature was established by Example 3 of the patent in suit and the Fornasari Declaration - which together demonstrated the gloss improvement resulting from the use of a block copolymer having a diene content of 90% by weight in lieu of only 70% by weight (gloss values:

"invention": 80; "prior art": 60) - the range of overlap of 15% of the diene content (diene content of 50% to 95% according to D1, respectively, >80% according to the "invention") had to be considered narrow and the distance of 10% of the diene content exemplified in D1 (Solprene®308: cf column 10, Table I) from the "inventive" lower limit of >80% had to be considered sufficiently far removed from the known range illustrated by means of examples.

- (g) The purposive character of the "inventive" selection of the diene amount of >80% by weight of the block copolymer was not affected by the Appellant's data which allegedly showed that a gloss improvement was obtained neither under polymerisation conditions and with block copolymers differing from those according to Example 3 of the patent in suit (Bouquet I) nor under identical polymerisation conditions but with non-identical block copolymers (Bouquet II).

The Appellant's so-called optimised polymerisation conditions made use of knowledge that was acquired after the effective date of the patent in suit and applied with the objective to obtain optimised gloss results; these experiments could not, therefore, be regarded to follow the teaching of the patent in suit.

Moreover the rubber starting materials (polybutadiene and block copolymer) used by the then Opponent in its experiments had to comprise an antioxidant different from that used according

to the patent in suit because the antioxidant then used had in the meantime been withdrawn from the market for health reasons. This cast further doubt on the reliability of the assumption that the experiments of the Opponent Appellant had been carried out in accordance with the factual conditions applicable to the specification of the patent in suit. It rather appeared that these experiments had been purposefully designed "*ex post facto*".

- (h) The claimed subject-matter also involved an inventive step over D1 because the experimentally established gloss improvement was not to be expected.

D1 failed to suggest that the use of block copolymers having a butadiene content in excess of that of Solprene®308 in combination with the use of particular amounts of polybutadiene rubber would be able to improve the gloss of rubber reinforced vinylaromatic (co)polymers.

- (i) For the reasons set out above with respect to the purposive character of the selection of a block copolymer having a diene content >80% by weight the Patentee's results were not invalidated by the Appellant Opponent's experimental reports Bouquet I and II which showed that gloss could also be adjusted by optimisation of the polymerisation conditions, ie addition time and amount of chain transfer agent and initiator. Rather the absence of the necessity of such

optimisations supported the inventivity of the claimed subject-matter.

- (j) In the event that the Board should not accede to the Respondent's arguments in favour of the main request, the Respondent at the oral proceedings submitted a set of 16 claims of a "first auxiliary request" whose main claim combined the features of Claim 1 with features of Claim 7 of the main request. The Respondent argued that this request should be admitted because it represented an attempt to deal with the objections raised by further restricting the claimed invention.

VII. The Appellant requested that the decision under appeal be set aside and the patent be revoked.

The Respondent requested that the appeal be dismissed and that the patent be maintained as follows:

main request: version as maintained by the Opposition Division;

or alternatively on the basis of the set of Claims 1 to 16 filed as first auxiliary request during the oral proceedings.

Reasons for the Decision

The appeal is admissible.

Main request

1. *Article 123 (2) and (3) EPC*

The question whether the deletion of the disclaimer "with the proviso that the content of peroxy oxygen-containing material in the blend is less than 0.25 grammillimoles per 100 grams of total rubber present in the blend" from granted Claim 1 contravenes Article 123(3) EPC depends on the protection conferred by the definition of the invention remaining after excision of the disclaimer: if the protection conferred by this remainder is not wider than the granted definition including the disclaimer then Article 123(3) EPC is not infringed.

It is apparent that, with regard to the presence of extraneous ingredients not explicitly enumerated in Claim 1, the protection conferred by said remainder is governed by the term "consisting essentially of". The issue under consideration thus boils down to the question whether this term excludes, as did the disclaimer, amounts of peroxy oxygen-containing material in the blend of at least 0.25 grammillimoles per 100 grams of total rubber present in the blend.

In the Board's judgment this is indeed the case because it is clear from the patent specification, and was expressly admitted by the Appellant, that the conditions disclosed therein for the preparation of the claimed rubber-reinforced vinyl aromatic (co)polymer

can only leave immeasurable traces of the peroxy oxygen containing polymerisation initiator which are in any case below the afore-mentioned limit.

The Appellant's stance that the patent in suit did not rule out the possibility of a subsequent admixture of higher amounts of peroxy oxygen-containing material to the rubber-reinforced copolymer is without merit because any interpretation of Claim 1 must, in accordance with Article 69(1) EPC, rely on the description of the patent and not on mere hypotheses.

The Board thus decides that the term "consisting essentially of" restricts the protection conferred to rubber-reinforced copolymers comprising amounts of peroxy oxygen-containing material lower than 0.25 grammillimoles per 100 grams of total rubber in the blend.

In view thereof it is concluded that the disclaimer did not provide a technical contribution restricting the protection conferred any more than it is already restricted by the term "consisting essentially of".

Hence Claim 1 does not contravene Article 123(3) EPC.

Given this situation there is no need to decide which (further) extraneous materials and/or comonomers and in what amounts might be considered in the light of the patent specification to satisfy the term "consisting essentially of" in Claim 1.

2. *Novelty*

2.1 Document D1

This is the only document cited in this appeal against the novelty of the claimed subject-matter.

The Appellant's arguments are not based on the disclosure of the preferred embodiment of D1 which has become the subject-matter of its Claim 1 (column 7, line 57 to column 9, line 17; Examples 9 to 15; Claim 1) but on the embodiment that is presented in the specification as the primary subject-matter (column 3, line 25 to column 7, line 56; Examples 1 to 6, Table I).

This latter embodiment is directed to rubber-modified impact resistant monovinylidene aromatic polymer compositions having dispersed therein:
from about 1 to about 40 wt.% based on weight polymer composition of a rubber composition consisting of a blend of:

- (a) from about 20 to about 95 wt.% polybutadiene (according to column 6, line 60 the lower limit of the range is 10%), and
- (b) from about 5 to about 80 wt.% of a block copolymer of butadiene with monovinylidene aromatic monomer and/or ethylenically unsaturated nitrile monomer (according to column 6, line 62 the upper limit of the range is 90%); said rubber composition being in the form of discrete particles having occluded therein and grafted thereto amounts of monovinylidene aromatic polymer (column 3, lines 26 to 44).

The block copolymers may comprise 50 to 95 wt.%, preferably 65 to 80 wt.%, most preferably 70 to 75 wt.%

polybutadiene (column 6, lines 47 to 50). According to D1's "inventive" Examples 3, 6 and 8 the butadiene styrene block copolymer Solprene®308 was used (column 10, Table I).

These compositions of D1 exhibit improved combinations of toughness and gloss (column 3, line 65 to column 4, line 2; column 10, Table I).

2.2 Taken literally there are three "differences" between the polymer compositions disclosed in D1 and those according to present Claim 1:

- (a) according to D1 the block copolymer may not only comprise butadiene and monovinylidene aromatic monomer but, instead or together with the last-mentioned monomer, also an ethylenically unsaturated nitrile monomer which is not within the scope of present Claim 1;
- (b) according to D1 the rubber phase comprises (pursuant to the broadest disclosure) from about 10 to about 95% by weight polybutadiene, and from about 5 to about 90% by weight of the block copolymer; according to present Claim 1 the corresponding amounts are 20 to 80% by weight of diene rubber and 80 to 20% by weight of block copolymer;
- (c) according to D1 the block copolymer comprises 50 to 95% by weight of polybutadiene; the corresponding amount according to present Claim 1 is >80% by weight, not indicating any upper limit.

- 2.3 As set out in the following none of these three "literal" differences, taken alone or together, are able to qualify as a novel selection.
- 2.3.1 Since there is agreement between the parties that block copolymers comprising ethylenically unsaturated nitrile monomer units instead or together with monovinylidene aromatic monomer units, an embodiment formally within D1's disclosure, had not been commercially available, the skilled person will not regard this as a practically feasible option. This conclusion is in line with the fact that the only block copolymer exemplified in D1 is the butadiene-styrene block copolymer Solprene®308 (column 10, lines 3 to 7, Table I, Examples 1, 3, 4, 6, 8). Not following this theoretical disclosure does not therefore amount to a real choice that provides a new element establishing a new technical teaching (Reasons 2.6 of T 12/90 of 23 August 1990, not published in the OJ EPO).
- 2.3.2 Nor can a novel element be acknowledged in the change of the weight ranges of the diene rubber and the block copolymer of, respectively, "about 10% to about 95%" and "about 5% to about 90%" according to D1 (column 6, lines 58 to 68) to "20% to 80%" and "80% to 20%" because the "inventive" ranges
- (a) are fully within the prior art ranges,
 - (b) cover the major, central portion of the prior art ranges, which
 - (c) almost fully correspond to the preferred percentage ranges "25% to 75%" and "75% to 25%" of the prior art (column 6, lines 63 to 66), and

- (d) embrace the weight proportions diene rubber/block copolymer exemplified in D1's "inventive" Examples 3 (50/50), 6 (50/50) and 8 (75/25).

It is conspicuous in the light of the above analysis that in the present case the definition of different, narrower limits of the prior art ranges does not lead to a new distinguishing teaching (cf T 12/90, Reasons 2.7) and that none of the three criteria for the novelty of a selection set out in T 198/84 and T 279/89 is met (see subsequent section 2.3.3(a)).

2.3.3 The same conclusion applies to the third literally distinguishing feature, ie the butadiene content of the block copolymer of from >80% and <100% by weight because this range can also not be considered a novel selection from the range of 50% to 95% by weight disclosed in D1 for the butadiene content of the block copolymer.

- (a) To qualify as a novel selection according to the criteria set out in T 198/84 and T 279/89 and adopted here the following conditions must be met:
 - (i) the selected sub-range should be narrow;
 - (ii) the selected sub-range should be sufficiently far removed from the known range illustrated by means of examples; and

- (iii) the selected area should not provide an arbitrary specimen from the prior art, i.e. not a mere embodiment of the prior description, but another invention (purposive selection).

- (b) Since these three criteria are all to be met, it suffices that one of it is not fulfilled for this novelty test to fail.

- (c) Since this is the case for criterion (iii) ie the requirement of a purposive selection, the "inventive" range of the diene rubber content of the block copolymer of >80% to <100% by weight cannot be regarded as a novel selection.
 - (i) The Board's refusal to acknowledge the involvement of a purposive selection of this "inventive" range results from the fact that, in its judgment, it is established by Bouquet I and II that abiding to this range (while meeting all other features of Claim 1) is not a test which guarantees the effective attainment of the objective underlying the claimed invention with regard to the closest prior art embodied by D1, namely obtaining compositions having *inter alia* improved gloss (paragraphs [0001] and [0015] of the patent specification).

 - (ii) The experimental report Bouquet I describes repetitions of Example 3 of the patent in suit and of the (comparative) experiment thereto carried out according to the

Fornasari Declaration using the polybutadiene Firestone®Diene 35 and the block copolymers Housmex Solprene®1322 (comprising 70% by weight of polybutadiene) or Firestone®Stereon 721A (comprising 90% by weight of diene rubber).

As compared thereto the Fornasari Declaration employed the polybutadiene BUNA®CB NF 35 and the block copolymer Solprene®308 (comprising 70% by weight of diene rubber); Example 3 of the patent specification uses the same polybutadiene but does not disclose the tradename of the block copolymer, which is only identified as being of the S-B (I) type comprising 10% by weight polystyrene and 90% by weight polybutadiene.

Identity of the rubber components used by the Respondent Patentee and by the Appellant Opponent is thus not established; nevertheless the rubber components used according to Bouquet I are in conformity with the requirements of Claim 1 of the patent in suit.

The same applies to the polymerisation parameters: Bouquet uses a different reactor design and modifies ("optimises") some of the reaction conditions (eg separate addition of the peroxide initiator and the chain transfer agent). But again these

changes do not go beyond the product definition of Claim 1.

Bouquet I determines gloss under two conditions: "bad gloss" measured under very stringent conditions and "good gloss"; under "bad gloss" conditions the "inventive" composition (comprising block copolymer having 90% by weight polybutadiene) perform worse than the "prior art" composition (comprising block copolymer having 70% by weight polybutadiene), under "good gloss" conditions the two compositions perform similarly.

- (iii) The experimental report Bouquet II uses the same materials and additives as Bouquet I but, without "optimisations", follows the polymerisation conditions of Example 3 of the patent in suit and the Fornasari Declaration.

In all tests the prior art compositions (comprising block copolymer having 70% by weight polybutadiene) exhibit better "bad gloss" and the "good gloss" is at least equivalent.

These results do not contradict those of the Respondent Patentee because (1) the rubber components used were not the same (BUNA@CB NF 35 vs. Firestone@Diene 35; Solprene@308 vs. Solprene@1322; Firestone@Stereon 720 (possibly used in Example 3 in view of

paragraph [0026] of the patent specification) vs. Firestone®Stereon 721A), and (2) the reactor design used by Bouquet was still not identical to that according to Example 3 of the patent.

- (iv) The only conclusion that can be drawn, in the Board's judgment, from these experimental data is that adhering to the qualitative and quantitative characteristics of Claim 1 and in particular to the use of a block copolymer having a diene rubber content >80% by weight does not necessarily lead to improved gloss but may even lead to a worsening of this property.
 - (v) The choice of such a block copolymer cannot therefore be regarded as purposive vis-à-vis the block copolymers according to D1 which may comprise from 50% to 95% diene rubber.
- (d) None of the afore-mentioned "literal differences" therefore satisfy the requirements for a novel selection.
- (e) Nor is there any evidence supporting the Respondent's contention that the "numerical novelty" of the ranges for the composition of the rubber phase (ratio polybutadiene/block copolymer) and the composition of the block copolymer (ratio diene/monovinylidene aromatic monomer) would suffice to establish novelty of the claimed subject-matter in the sense of Article 54 EPC under the concept of "multiple selection".

Since there is no functional interdependence of these "selected" ranges with regard to the gloss properties to be achieved but by contrast - as admitted by the Respondent Patentee's reliance on the alleged importance of only one range (ie the diene/monovinylidene aromatic monomer ratio in the block copolymer) - an essential dependence of this property on one of the ranges only, there is no room for the assessment of novelty on the basis of multiple selection.

This situation is completely different from the one underlying T 651/91 cited by the Respondent which was *inter alia* concerned with the question whether the novelty of an embodiment could be recognised if this implied the selection of one from only two possible alternatives (Reason 4.3).

- 2.4 The subject-matter of Claim 1 is therefore not novel over the disclosure of document D1.
3. Hence the main request must be refused.
4. There is thus no need to investigate the other grounds of opposition.
5. "*First auxiliary request*"
This request is not admitted because
 - it was filed very late and outside the time limit set by the Board in its Annex to the summons to attend oral proceedings dated 6 May 2004,
 - the amendments introduced could not *prima facie* be considered appropriate to set aside the Board's

concerns relating to lack of novelty of the main request, but on the contrary

- introduced new criteria for the assessment of novelty and inventive step requiring new investigations, making it thus impossible to arrive at a final decision at the oral proceedings.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The main request is refused.
3. The first auxiliary request is not admitted.
4. The patent is revoked.

The Registrar:

The Chairman:

E. Görgmaier

R. Young