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D E C I S I O N
of 16 April 1998

Case Number: T 0061/95 - 3.3.3

Application Number: 83305648.4

Publication Number: 0104899

IPC: C08F 279/04

Language of the proceedings: En

Title of invention:

Process for producing thermoplastic resins and compositions
containing the same

Patentee:

Japan Synthetic Rubber Co., Ltd.

Opponent:

BASF Aktiengesellschaft, Ludwigshafen

Headword:

-

Relevant legal provisions:

EPC Art. 54(3)

Keyword:

"Novelty - (yes) - overlap eliminated"

Decisions cited:

T 0026/85, T 0124/87, T 0666/89, T 0012/90

Catchword:

-



Case Number: T 0061/95 - 3.3.3

D E C I S I O N
of the Technical Board of Appeal 3.3.3
of 16 April 1998

Appellant: BASF Aktiengesellschaft, Ludwigshafen
(Opponent) -Patentabteilung - C6-
Carl-Bosch-Strasse 38
67056 Ludwigshafen (DE)

Representative: -

Respondent: Japan Synthetic Rubber Co., Ltd.
(Proprietor of the patent) 11-24, Tsukiji-2-chome
Chuo-ku
Tokyo 104 (JP)

Representative: Lamb, Martin John Carstairs
Marks & Clerk
57-69 Lincoln's Inn Fields
London WC2A 3LS (GB)

Decision under appeal: Decision of the Opposition Division of the
European Patent Office posted 21 November 1994
rejecting the opposition filed against European
patent No. 0 104 899 pursuant to Article 102(2)
EPC.

Composition of the Board:

Chairman: C. Gérardin
Members: P. Kitzmantel
J. A. Stephens-Ofner

Summary of Facts and Submissions

I. European patent application No. 83 305 648.4 in the name of JAPAN SYNTHETIC RUBBER CO., LTD, which had been filed on 22 September 1983, claiming priority from a JP application filed on 22 September 1982, resulted in the grant of European patent No. 104 899 on 8 May 1991, on the basis of 13 claims, independent Claim 1 reading as follows:

"A process for producing a thermoplastic resin by polymerising a monomer mixture of an ethylenically unsaturated nitrile monomer and an alkenyl aromatic monomer in the presence of a rubbery polymer latex, characterised in that (i) the monomer mixture essentially consists, as the only copolymerisable monomers, of the two said monomers and (ii) the polymerisation is effected in at least two steps:

(a) a first step or steps in which in total from 30 to 70% by weight of the whole monomer mixture is polymerised, the unsaturated nitrile monomer content of the mixture in this step or in each of these steps being from 0 to 18% by weight; and

(b) a subsequent step or steps in which the remainder of the monomer mixture is polymerised, the overall unsaturated nitrile monomer content of the mixtures in this step or steps being from 35 to 90% by weight, and the content of unsaturated nitrile monomer units in the polymer part formed by polymerisation in steps (a) and (b) being from 28 to 38% by weight."

Claims 2 to 13 were dependent on Claim 1.

II. Notice of Opposition requesting revocation of the patent in its entirety was filed on 7 November 1991 on the ground that the subject-matter of the patent did not comply with the requirement of novelty according to Article 54(3) EPC over document

D1: EP-A-81 761.

III. By its decision of 1 July 1994, issued in writing on 21 November 1994, the Opposition Division recognized the novelty of the subject-matter of the patent in suit and rejected the opposition.

The Opposition Division held on page 5, last paragraph, first sentence of its decision: "Although there is a point of overlap, or point of common values, whereby compositions of the present patent may fall within the range disclosed in the prior art, the lack of specific values in the prior art which give all features of the claim 1 together means that novelty has to be recognised on the basis of a specific selection of ranges in present claim 1."

IV. On 20 January 1995 the Opponent (Appellant) lodged an appeal against the decision of the Opposition Division and simultaneously paid the appeal fee. The Statement of Grounds of Appeal was submitted on 7 March 1995.

The Appellant contended that the subject-matter of the patent in suit was not novel over document D1 to the extent that it related to a process where in a first stage only styrene was polymerized and where the acrylonitrile content of the total monomer mixture was from 35 to 40%. He furthermore argued that the statement in Claim 1 of the patent in suit concerning the content of unsaturated nitrile monomer units in the polymer part formed by the polymerization in steps (a) and (b) was a functional definition which could not establish novelty.

- V. The Respondent (Patentee) defended his case in a submission dated 18 July 1995.

- VI. In an annex to the summons to attend oral proceedings to be held on 9 December 1997 the Rapporteur informed the parties that in the Board's preliminary opinion the respective core/shell polymer compositions, according to D1 and according to the patent in suit, overlapped with regard to a single embodiment, i.e. under the condition that, in the first step, styrene was used as sole monomer in an amount of 30 php (parts per hundred parts polymer) and, in the second step, a mixture of styrene and acrylonitrile in an amount of 70 php was used, which mixture comprised 28 php acrylonitrile. The Rapporteur concluded, in line with i.a. T 12/90 dated 23 August 1990 (not published in the OJ EPO), T 124/87 (OJ EPO 1989, 491), T 666/89 (OJ EPO 1993, 495) and T 26/85 (OJ EPO 1990, 022), that this overlap resulted in anticipation, because it concerned **classes** of core/shell polymers, not particular compounds, and because the person skilled in the art would have no

difficulties to carry out the prior art teaching in the range of overlap.

VII. With his submission dated 21 October 1997 the Respondent gave notice that he did not intend to attend oral proceedings and filed an amended set of 12 claims, Claim 1 reading as follows:

"A process for producing a thermoplastic resin by polymerising a monomer mixture of an ethylenically unsaturated nitrile monomer and an alkenyl aromatic monomer in the presence of a rubbery polymer latex, selected from the group consisting of polybutadiene, acrylonitrile-butadiene copolymers, styrene-butadiene copolymers, isoprene rubber, chloroprene rubber, and ethylene-propylene-diene rubbers, characterised in that (i) the monomer mixture essentially consists, as the only copolymerisable monomers, of the two said monomers and (ii) the polymerisation is effected in at least two steps:

(a) a first step or steps in which in total from 30 to 70% by weight of the whole monomer mixture is polymerised, the unsaturated nitrile monomer content of the mixture in this step or in each of these steps being from 0 to 18% by weight; and

(b) a subsequent step or steps in which the remainder of the monomer mixture is polymerised, the overall unsaturated nitrile monomer content of the mixtures in this step or steps being from 35 to 90% by weight, and the content of unsaturated nitrile monomer units in the polymer part formed by polymerisation in steps (a) and

(b) being from 28 to 38% by weight."

VIII. Following direct contact between the parties on 7 November 1997 by phone as well as by facsimile, the Appellant, in a facsimile dated 13 November 1997, withdrew his request for oral proceedings and declared that he would not attend them, if they would be based on the afore-mentioned amended set of claims as Main Request.

IX. In reaction to a communication of the Rapporteur waiving his previous novelty objection, the Respondent, with his letter dated 17 March 1998, filed an amended specification brought into accordance with the amended claims.

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

The Respondent requested that the decision under appeal be set aside and the patent be maintained on the basis of the afore-mentioned amended specification including the set of claims filed with his submission dated 17 March 1998.

Reasons for the Decision

1. The appeal is admissible.
2. *Articles 123(2) and (3) EPC*

The amendment of Claim 1 is based on the list of the

suitable rubbery polymers in the application as filed (page 4, fourth paragraph) and in granted Claim 2 from which acrylic rubber has been deleted. The scope of Claim 1 is thus narrower than that of its version as granted.

Claims 2 to 12 correspond to Claims 3 to 13 as granted.

Thus, the claims comply with the requirements of Articles 123(2) and (3) EPC.

3. *Article 54 EPC*

3.1 Document D1, to be considered under Article 54(3) EPC, relates according to Claim 1 to a thermoplastic composition comprising

- (i) polymer particles constituted by a core of an elastomeric polymer (A) having a glass transition temperature T_g of below 0°C , which polymer comprises i.a. from 50 to 99,9% by weight of an alkyl acrylate, and a shell of a copolymer (B) of a vinylaromatic monomer b_1 and an ethylenically unsaturated monomer b_2 , which shell (B) is prepared in two steps, where in a first step monomer b_1 is used in an amount of 20 to 70% by weight of the total amount of the monomer b_1 , and in the second step a mixture of the two monomers b_1 and b_2 in a weight ratio b_1/b_2 of 90/10 to 60/40 is used in an amount of 30 to 80% by weight of the total amount of the monomers $b_1 + b_2$,

- (ii) a copolymer (C) prepared from one or more vinylaromatic monomer(s) c_1 and from one or more ethylenically unsaturated monomer(s) c_2 , and
- (iii) optionally usual additives.

3.2 In view of the fact

- (i) that the core/shell polymers disclosed in D1 must comprise a major portion of alkyl acrylate, and
- (ii) that the rubbery polymers to be used according to the patent in suit do no longer include acrylic polymers,

there is no overlap in the definitions of these features in D1 and the patent in suit.

3.3 Because of the difference in the constitution of the rubber polymers, used respectively according to D1 and according to present Claim 1, which difference represents a clear distinguishing feature, the interpretation of the Respondent's assertion that the feature in Claim 1 of the patent in suit concerning the content of unsaturated nitrile monomer units in the polymer part formed by the polymerization in steps (a) and (b) was a functional definition which could not establish novelty (Statement of Grounds of Appeal, page 2), is of no consequence.

3.4 Claim 1 of the patent in suit is thus novel within the meaning of Article 54(3) EPC over the disclosure of document D1.

3.5 The same conclusion applies to Claims 2 to 12 which are all dependent upon Claim 1.

4. *Article 56 EPC*

Since document D1 is state of the art to be considered solely under Article 54(3) EPC, and since D1 is the only document cited by the Opponent/Respondent, the question of obviousness does not arise.

5. The specification of the patent in suit as amended also complies with the further requirements of the EPC, particularly with those of Article 84 EPC.

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.
2. The case is remitted to the first instance with the order to grant a patent in the following version:

Claims: No. 1 to 12 filed with letter dated 17 March 1998.

Description: Pages 2 to 21 filed with letter dated 17 March 1998.

The Registrar:

The Chairman:

E. Görgmaier

C. Gérardin