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**Datasheet for the decision  
of 14 December 2018**

**Case Number:** T 1577/15 - 3.3.03  
**Application Number:** 03769113.6  
**Publication Number:** 1554334  
**IPC:** C08K3/00, C08L9/02, C08L15/00  
**Language of the proceedings:** EN

**Title of invention:**

HYDROGENATED NITRILE RUBBER COMPOSITES WITH IMPROVED  
PROCESSABILITY

**Patent Proprietor:**

ARLANXEO Canada Inc.

**Opponent:**

ZEON CORPORATION

**Relevant legal provisions:**

EPC Art. 54, 56  
RPBA Art. 12(2)

**Keyword:**

Novelty - (yes) - main request  
Inventive step - (yes) - main request  
Late filed documents not admitted by opposition division -  
incorrect exercise of discretion - no

**Decisions cited:**

G 0007/93, T 0640/91



**Beschwerdekammern**

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Case Number: T 1577/15 - 3.3.03

**D E C I S I O N**  
**of Technical Board of Appeal 3.3.03**  
**of 14 December 2018**

**Appellant:**

(Opponent)

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**Decision under appeal:**

**Decision of the Opposition Division of the  
European Patent Office posted on 11 May 2015  
rejecting the opposition filed against European  
patent No. 1554334 pursuant to Article 101(2)  
EPC.**

**Composition of the Board:**

**Chairman**            D. Semino  
**Members:**           M. C. Gordon  
                             R. Cramer

## Summary of Facts and Submissions

I. The appeal of the opponent lies against the decision of the opposition division posted on 11 May 2015 rejecting the opposition against European Patent number 1 554 334.

II. The patent was granted on the basis of 6 claims whereby claim 1 read as follows:

"A polymer composite comprising at least one hydrogenated nitrile rubber polymer having a Mooney viscosity (ML 1+4 @ 100°C) in the range of from 30 to below 45 and a polydispersity index of less than 2.9, at least one filler and optionally at least one cross-linking agent."

III. Opposition against the patent was filed, invoking the grounds pursuant to Article 100(a) EPC (lack of novelty, lack of inventive step) and Article 100(b) EPC.

The following of the documents cited in the decision under appeal are relevant for the present decision:

D1: JP-8-100082;  
D1a: English translation of D1  
D2: JP 8-100025  
D2a: Machine translation of D2  
D2b: Partial human translation of D2  
D2c: EP-A-704 459 family member of D2  
D4: EP-A-972 797.  
D6: Copy of ASTM D-1646 (Excerpt).

In the following the set of documents D2, D2a, D2b and D2c will be referred to as "D2" unless a particular

version thereof is meant. It was not contested that all of D2a-D2c correctly represented the content of D2.

- IV. According to the decision, a number of documents cited after the expiry of the opposition period (D7, D7a, D8-D10) were not admitted to the procedure on the grounds that they were not *prima facie* relevant.

The requirements of sufficiency of disclosure were met. The determination of the Mooney viscosity was held to be disclosed by means of reference to the standard D6.

The opposition division held - also in the section relating to sufficiency of disclosure - that there was no evidence to support an objection raised that a HNBR having polydispersity index (PDI) below the values shown in the examples and a Mooney viscosity within the claimed range would not solve the problem underlying the patent. It was also held that the patent provided enough information relating to the preparation of the hydrogenated NBR.

Novelty was recognised because the prior art (*inter alia* document D2) did not provide a disclosure of HNBR having - simultaneously - Mooney viscosity and PDI in the required ranges.

An inventive step was also recognised, the claimed combination of these features being held to give rise to improvements in processability and physical properties, which benefits were not rendered obvious by the prior art.

Accordingly the opposition was rejected.

- V. The opponent (appellant) lodged an appeal against the decision.

Objections pursuant to sufficiency of disclosure, novelty and inventive step were maintained. The decision regarding the non-admittance of the late filed documents was also challenged.

- VI. The patent proprietor (respondent) replied to the appeal, submitting six sets of claims as auxiliary requests 1-6.

- VII. The Board issued a summons to oral proceedings.

In the provisional opinion of the Board, the appellant had failed to demonstrate that the conclusions of the decision were incorrect in any respect. It was also held that the opposition division had not exercised its discretion inappropriately when reaching the decision not to admit the late filed documents. Regarding inventive step the Board noted that the appellant had presented a line of argument - based on a combination of D2 and D4 - which had not been advanced during proceedings before the opposition division and raised the question, in particular since the preliminary opinion of the opposition division as communicated to the parties was maintained in the decision, of the admissibility of this line of argument pursuant to Article 12(4) RPBA.

- VIII. The appellant filed a further written submission on 6 December 2018.

- IX. Oral proceedings were held before the Board on 14 December 2018.

X. The arguments of the appellant as far as relevant to the present decision can be summarised as follows:

(a) Sufficiency of disclosure

The objection that the examples of the patent did not provide enough information to prepare the hydrogenated NBR according to the claims was maintained on the basis of references to submissions advanced in the opposition procedure.

It was further argued that an objection that the claims were overly broad had not been dealt with. Although the decision stated that such matter belonged properly in the consideration of inventive step, no assessment of this matter under Article 56 EPC had been undertaken.

(b) Novelty

D2 disclosed the features of Mooney viscosity, PDI and the presence of a filler. Insofar as the ranges according to claim 1 overlapped with the ranges disclosed in D2, such that selections from the general disclosure of D2 were required, said selections could not confer novelty. With respect to D1 the arguments as advanced for D2 applied.

(c) Inventive step

In line with the assessment of novelty, the only distinguishing feature was the presence of a filler in the case this was held not to be disclosed in combination with the specified ranges of the Mooney viscosity and PDI. This however could not support an inventive step.



In the alternative, following the preliminary position of the decision under appeal, the combination of D2 with the teaching of D4 rendered the subject-matter claimed obvious in particular with respect to the specified value for the PDI.

(d) Admittance of the documents D7, D7a, D8-D10

The opposition division had erred in its assessment as to the relevance of these documents, so that the decision on admittance should be overturned.

XI. The arguments of the respondent as far as relevant for the present decision can be summarised as follows:

(a) Sufficiency of disclosure

The decision had held that no supporting evidence for the objections raised had been advanced. As the situation remained the same, there was no reason to overturn the decision on sufficiency of disclosure.

(b) Novelty

A plurality of selections from the disclosure of D2 (and D1) were required. The examples of D2 related to compositions with values of Mooney viscosity far above the claimed range. It was also the case that the teaching of D2 required that a proportion of low molecular polymer be present, which would tend to increase the PDI above the claimed range. Thus neither D2 nor D1 disclosed composites having simultaneously the properties as required by operative claim 1.

(c) Inventive step

The appellant had failed to address the reasoning of the decision because the findings regarding the identity of the distinguishing feature had been disregarded.

D4 was concerned with the provision of a composition for use as an adhesive, not for injection moulding as in the patent-in-suit. Furthermore the process thereof involved subjecting the rubber to shearing forces which would have the effect of reducing the molecular weight, thus broadening the PDI which was contrary to what was required by the patent. Therefore there was no reason to combine the teaching of D4 with that of D2. In any case such a combination could not lead to the subject-matter claimed.

XII. The appellant requested that the decision under appeal be set aside and that the European patent No. 1 554 334 be revoked.

XIII. The respondent requested that the appeal be dismissed, or alternatively that the decision under appeal be set aside and the patent be maintained in amended form on the basis of one of auxiliary requests 1 to 6 filed with the reply to the statement of grounds of appeal.

### **Reasons for the Decision**

1. Admittance of the late filed documents

According to the established case law, in particular decision G 7/93 (OJ EPO 1994, 775), point 2.6 of the

reasons, Boards of Appeal should only overturn discretionary decisions of the first instance if it is concluded that the first instance exercised its discretion according to the wrong principles, or without taking into account the right principles or in an unreasonable way. In particular it is not the function of a board to review all the facts and circumstances of the case as if it were the first instance department. See also T 640/91 (OJ EPO 1994, 918) section 6.3 of the reasons.

The submissions of the appellant were however directed precisely to securing a reassessment of the facts. Crucially it has not been argued, let alone rendered credible, that there had been any incorrect exercise of discretion on the part of the opposition division in reaching the decision not to admit these documents.

Accordingly the Board can identify no reason to overrule the opposition division's findings on non-admittance of D7-D10 to the procedure.

2. Sufficiency of disclosure

Regarding the objection (section IV of the statement of grounds of appeal) in respect of the question whether the patent provides enough information to prepare the hydrogenated NBR, only by reference to the pleadings in the opposition brief the Board observes that this form of submission does not meet the requirements of Article 12(2) RPBA, according to which the statement of grounds of appeal shall set out clearly and concisely the reasons why it is requested that the decision under appeal be reversed i.e. shall explain why the opposition division's position is considered to be incorrect. In the absence of any such reason, the

objection is to be dismissed.

Regarding the objection in the second paragraph of section IV of the statement of grounds of appeal relating to the breadth of the claims, it is objected that the opposition division did not address this matter, in particular with respect to inventive step. However it is apparent from the minutes of the oral proceedings that the opponent did not seek to have this aspect considered under inventive step. In particular it is not apparent that a document as closest prior art was identified which could provide a basis for such an objection. In any case the submission of the appellant does not amount to an objection of lack of sufficiency.

It is therefore concluded that the objections of lack of sufficiency of disclosure have not been proven, so that the Board has no reason to overturn the decision on sufficiency of disclosure.

### 3. Novelty

Whilst the parties agreed that document D2 concerns polymer composites comprising a hydrogenated nitrile rubber polymer, the point of dispute was whether values of the Mooney viscosity in the range from 30 to below 45, values of the polydispersity index below 2.9 and the presence of a filler were disclosed in combination therein.

D2b discloses in paragraph [0011] ranges of Mooney viscosity of 15-200 and 30-100. The lower value of the more restricted range is within the scope of operative claim 1. With respect to the polydispersity index PDI, it is apparent from the partial human translation D2b that according to paragraph [0106] a PDI (i.e. a value

of the ratio Mw/Mn) of 2.3-5.5 is disclosed, the lower value being an explicit disclosure of a value within the range of claim 1.

According to paragraph [0060] of D2b fillers are optional.

In the examples of D2 all compositions have Mooney viscosity well above the range of claim 1 while values for the polydispersity and the presence of a filler are not disclosed (with reference to the family document D2c).

Furthermore with reference to paragraph [0106] of D2b the composition according to one preferred embodiment contains 3 to 20 wt% of a "low molecular" weight fraction having Mn of not larger than 35,000. The presence of this fraction will have the effect of broadening the molecular weight dispersion and hence increasing the PDI, which predicates against a value in the range as required by the claim.

Thus it is concluded that in order to arrive at values of PDI and Mooney viscosity within the range of operative claim 1 it is necessary to make two independent selections from the broader disclosure of D2. A pointer to that combination is not present in D2. Moreover the specific examples do not provide a corresponding disclosure. Furthermore with respect to the PDI, in view of the statement in paragraph [0106] relating to the presence of low molecular weight material, it appears that the teaching of D2 is to have values away from the lower end of the generally disclosed range, i.e. that part overlapping with the range defined in operative claim 1.

In addition filler is not explicitly disclosed in the

composition of the examples of D2.

Accordingly neither the specific examples of D2 nor the general disclosure thereof provide a disclosure of the subject-matter of the claimed invention.

Accordingly there are no grounds for coming to a different conclusion than the opposition division on the question of novelty.

The disclosure of D1 is broadly the same as that of D2 as are the arguments of the parties with respect thereto with the consequence that the same conclusions are reached.

4. Inventive step

The decision under appeal started the analysis of inventive step, consistently with the findings on novelty, on the basis that the distinguishing features with respect to closest prior art D2 were the specified ranges for Mooney viscosity and PDI and the presence of a filler in combination.

In one approach in the submissions in the statement of grounds of appeal the appellant did not address this reasoning but maintained the view, as set out in the opposition proceedings, that the only distinguishing feature was the presence of the filler.

Accordingly the appellant did not provide any reasons to support the position that the findings of the decision in this respect were incorrect as the reasons thereof were not addressed. These submissions are therefore not relevant and no reasons for overturning the decision on inventive step can be derived

therefrom.

Similarly, the contention that an effect had not been shown to arise over the entire scope of the claims (statement of grounds of appeal, page 20, second paragraph) cannot be entertained since this is based on the incorrect premise that the presence of filler constituted the only distinguishing feature.

As a further argument, it was submitted that the combination of the teachings of D2 and D4 would render the subject-matter claimed obvious.

Notwithstanding the question of admissibility of this argument to the proceedings (see section VII above), the patent in suit and D2 relate to the provision of compositions for injection moulding (patent in suit, paragraph [0001 and [0043]; D2a paragraph [0004], [0006], [0007]).

In contrast D4 relates to a composition for the production of belts involving embedding fibres within the polymer mass - section "Industrial Applicability".

It has not been rendered credible that the skilled person seeking to provide composites for injection moulding would consider a document such as D4 which addresses compositions for a different type of (moulding) use and which were therefore required to exhibit a different set of properties.

Accordingly the Board considers that the skilled person starting from closest prior art D2 would not take D4 into consideration independently of the formulation of the technical problem.

On this basis it is concluded that also for inventive step no reasons have been provided by the appellant which lead the Board to overturn the decision of the opposition division.

## Order

### For these reasons it is decided that:

The appeal is dismissed.

The Registrar:

The Chairman:



G. Rauh

D. Semino

Decision electronically authenticated