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**D E C I S I O N**  
**of 22 January 2002**

**Case Number:** T 0144/00 - 3.2.6

**Application Number:** 94111080.1

**Publication Number:** 0642778

**IPC:** A61F 13/15

**Language of the proceedings:** EN

**Title of invention:**

Absorbent article

**Patentee:**

KIMBERLY-CLARK WORLDWIDE, INC.

**Opponent:**

SCA Hygiene Products AB

**Headword:**

-

**Relevant legal provisions:**

EPC Art. 52(1), 54(1), 56, 83, 100(a), 102(3), 123(2)  
EPC R. 29(3)

**Keyword:**

"Novelty (main request) - no"

"Admissibility of amendments (auxiliary request) - yes"

"Novelty and inventive step (auxiliary request) - yes"

**Decisions cited:**

-

**Catchword:**

-



Case Number: T 0144/00 - 3.2.6

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.6**  
**of 22 January 2002**

**Appellant:** SCA Hygiene Products AB  
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**Representative:** Romare, Laila Anette  
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**Respondent:** KIMBERLY-CLARK WORLDWIDE, INC.  
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**Representative:** Grünecker, Kinkeldey,  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 13 December 1999  
rejecting the opposition filed against European  
patent No. 0 642 778 pursuant to Article 102(2)  
EPC.

**Composition of the Board:**

**Chairman:** P. Alting van Geusau  
**Members:** G. C. Kadner  
M. B. Tardo-Dino

## Summary of Facts and Submissions

- I. The mention of the grant of European patent No. 0 642 778 in respect of European divisional patent application No. 94 111 080.1 deriving from earlier application No. 91 100 118.8 filed 2 January 1991 and claiming a US-priority of 9 January 1990 was published on 26 March 1997.
- II. Notice of opposition was filed on 22 December 1997 by the Appellant (Opponent), on the grounds of Article 100(a) EPC, and during the opposition proceedings additionally objections under Articles 123(2) and 83 EPC were raised.
- III. By decision of the Opposition Division announced during the oral proceedings on 19 October 1999 and posted on 29 November 1996 the opposition was rejected.

The Opposition Division was of the opinion that the patent as granted met the requirements of Articles 123(2) and 83 EPC and that, having regard to the state of the art disclosed in:

D1: WO-A-88/04 165

D2: "Recent Commercial Technology With Superabsorbent Powder Spray systems" (Sept. 1986)

D3: EP-A-0 313 800

D4: FR-A-2 627 080

the claimed subject-matter was novel and inventive.

IV. On 11 February 2000 a notice of appeal was lodged against the decision together with payment of the appeal fee.

The statement of grounds of appeal was filed on 19 April 2000.

V. In a communication dated 26 October 2001 the Board pointed out that the subject-matter of claim 1 appeared to lack novelty when considering the disclosure of D3.

VI. Oral proceedings were held on 22 January 2002.

The Appellant requested that the decision under appeal be set aside and that the European patent No. 0 642 778 be revoked.

The Respondent (Patentee) requested that the appeal be dismissed and that the patent be maintained as granted (main request),

or be maintained in amended form on the basis of the auxiliary request filed during the oral proceedings together with the other pages of the description and figures of the patent as granted.

The main request comprises 14 claims. Claim 1 reads as follows:

"An absorbent article, comprising:

a substantially integral fibrous layer (42') of hydrophilic fibers; and

a quantity of superabsorbent particles (10) integrally

mixed among said fibers (40) in a non-layered configuration, and arranged with weight percentages of said superabsorbent particles (10) with respect to a total weight of superabsorbent, nonuniformly distributed along a length dimension of said article, wherein selected cross-directionally extending, superabsorbent-containing regions which are positioned along the length of said fibrous layer have higher percentages of superabsorbent than other cross-directionally extending, superabsorbent-containing regions positioned along the length of said fibrous layer,

characterized in that

the weight percentage amount of said superabsorbent does not change in a substantially direct correspondence with a length-wise change in a local basis weight of said hydrophilic fibers (40)."

The auxiliary request comprises two independent claims 1 and 3 which include the wording of the precharacterizing portion of claim 1 according to the main request, and which comprise the following additional features:

Claim 1:

"... wherein the weight percentage amount of said superabsorbent does not change in a substantially direct correspondence with a length-wise change in a local basis weight of said hydrophilic fibers ; and

wherein said quantity of superabsorbent particles is distributed along said fibrous layer length in a

particle distribution profile having a general shape of an inverted spoon with a bowl section (250) having relatively higher concentrations of superabsorbent particles and a handle section (252) having relatively lower concentrations of superabsorbent, said bowl section positioned toward a front waistband edge of said absorbent article."

Claim 3:

"... wherein the weight percentage amount of said superabsorbent does not change in a substantially direct correspondence with a length-wise change in a local basis weight of said hydrophilic fibers such that the regions having increased level of superabsorbent are offset from the regions having increased level of basis weight of hydrophilic fibers; and

wherein said quantity of superabsorbent particles is distributed along said article length with a particle distribution profile having a general shape of a plateau (272)."

VII. In support of its requests the Appellant essentially relied upon the following submissions:

The absorbent article according to claim 1 of the main request lacked novelty because D3 did disclosed not only the features of the precharacterizing portion but also the characterising features of claim 1. The diaper shown in Figure 2 in cross-section had a basis weight of 600 g/m<sup>2</sup> in its central portion and of 300 g/m<sup>2</sup> in its edge portions. The respective weight percentage amount of superabsorbent was 12% in the central portion and 3% in the edge portions (column 3, lines 1 to 10)

which resulted in an eight times higher amount of superabsorbent in the crotch area when compared to the waistband areas. This weight distribution of superabsorbent according to D3 would be the same as indicated in the characterising feature of claim 1 of the patent in suit since that amount of superabsorbent did not change in a direct correspondence with the change in local basis weight of hydrophilic fibers.

With respect to the auxiliary request the amendments were not admissible under Articles 123(2) and (3) EPC because the term "direct correspondence", as interpreted by the Respondent, was not defined in the originally filed application. Furthermore, since an "offset" of maxima of superabsorbent and quantity of hydrophilic fibers was not originally disclosed, the claimed teaching was not clear. Furthermore the expression "change in basis weight" was not clear.

In any case the subject-matter claimed lacked an inventive step. D3 (column 1, lines 27 to 37) already addressed the problem of positioning the superabsorbent in those areas where it was most needed. Consequently it was obvious to a skilled person to arrange the maximum quantity of superabsorbent independently from the position of fiber reinforcements at the places where liquids ran off, e.g. with regard to the different boys' and girls' physical properties, thus arriving at the claimed distribution profiles of superabsorbent without the involvement of an inventive step.

VIII. The submissions of the Respondent are summarised as follows:

Considering the term "direct corresponding" in the mathematical sense (see "Webster's New Universal Unabridged Dictionary") an increase of one quantity required an increase of the other quantity - independently of the scale or multiplication factor. This clearly was the case in the article in D3 where the region of increased amount of superabsorbent was "in phase" with the area of increased level of base weight of the fibers. The aim of the claimed absorbent article, however, was the distribution of a higher quantity of superabsorbent fully independent of areas of increased basis weight of hydrophilic fibers thus not directly corresponding to each other.

The amendments to the claims made during the examination procedure and according to the auxiliary request were clearly disclosed in the claimed relations in the originally filed earlier application and in the specification of the patent in suit.

None of the cited documents would give any incentive to the selection of the claimed particular distribution profiles of superabsorbent with respect to the fluff nor to an offset of the maxima of quantities of superabsorbent and of hydrophilic fibers. Therefore inventive step could be denied only under ex-post facto considerations.

### **Reasons for the Decision**

1. The appeal is admissible.
  
2. *Main request*



2.1 The Board agrees with the opinion of the parties in that D3 discloses an article which includes the features of the precharacterizing portion of claim 1 of the main request.

However, the Board cannot follow the restricted interpretation given to the term "direct corresponding" as was submitted by the Respondent.

2.2 If an expression of a claim is not clear enough to be understood unambiguously and without any doubt as to what it means, in accordance with Article 69 EPC the description and drawings of the patent shall be used to interpret the claims. Further consultation of technical literature such as lexica etc. is only necessary if the information in the patent itself is insufficient. Considering Figures 17, 17A, 19, 19A under these premises it is clearly recognizable that the maxima of superabsorbent and fluff quantities along the length of the absorbent article are in a "substantially direct correspondence" when applying the definition that if one value increases the other value is increased too without changing in a particular relation in increase or decrease (see "Webster" cited by the Respondent). In the description of the patent as granted (column 4, lines 30 to 34, 40 to 44) it is explained that these graphs of "in-phase" distribution profiles are part of the invention disclosed in the patent.

It is true that other figures (20, 20A, 21) show an "out of phase" arrangement of SAM and fluff distribution but no indication is derivable from the patent that the features of claim 1 should be interpreted to relate only to these particular embodiments (see also column 24, line 58, according to

which the maximum weight percentage of intermixed fibrous material **can** be offset lengthwise from the region of maximum SAM).

- 2.3 Considering now the teaching of D3 (column 2, line 55 to column 3, line 10), the quantity of superabsorbent in relation with the fiber material changes also "in-phase" from the edge portion across the central portion to the other edge portion along the length of the absorbent article by a factor of eight. In view of the definition given in the patent the distribution profile of D3 is comparable with that of the patent. Consequently according to D3 the weight percentage amount of superabsorbent also does not change in a substantially direct correspondence with the change in local basis weight of the fibers. Thus all features of claim 1 are disclosed in the prior art and therefore its subject-matter lacks novelty (Article 54(1) EPC).

For this reason the main request is not allowable.

### 3. *Auxiliary request*

#### 3.1 Amendments and clarity of disclosure

Claim 1 of the auxiliary request is composed of granted claims 1 and 2. The features of granted claims 1 and 2 are disclosed in the originally filed divisional application (claim 1; description page 4, last paragraph; page 35, first paragraph; page 37, second paragraph; Figure 11A).

The disclosure of claim 3 of the auxiliary request is further supported by the originally filed description of the divisional application (page 36, second

paragraph; page 37, last paragraph to page 38). Particularly the term "change in local basis weight" is clearly understandable in connection with the second line of claim 3 where "a substantially integral fibrous layer of hydrophilic fibers" is mentioned which, of course, has a certain weight per unit of area.

The description was amended to take account of the newly claimed subject-matter and does not give rise to objections under Article 123(2) EPC either.

### 3.2 Novelty

Novelty of the subject-matter of claims 1 and 3 according to the auxiliary request was not contested by the Appellant. The Board has also arrived at the conclusion that none of the prior art documents discloses all features of these independent claims (Article 54(1) EPC).

### 3.3 Inventive step

- 3.3.1 The closest prior art is represented by D3. This document discloses an absorbent article comprising a substantially integral fibrous layer (42') of hydrophilic fibers and a quantity of superabsorbent particles (10) integrally mixed among said fibers (40) in a non-layered configuration, and arranged with weight percentages of said superabsorbent particles (10) with respect to a total weight of superabsorbent, nonuniformly distributed along a length dimension of said article, wherein selected cross-directionally extending, superabsorbent-containing regions which are positioned along the length of said fibrous layer have higher percentages of superabsorbent than other cross-

directionally extending, superabsorbent-containing regions positioned along the length of said fibrous layer wherein the weight percentage amount of said superabsorbent does not change in a substantially direct correspondence with a length-wise change in a local basis weight of said hydrophilic fibers.

Starting from such an absorbent article the problem underlying the patent is the avoidance of disadvantages of products conventionally aiming at a more efficient use of the absorbent material and provision of a more effective localized placement of the superabsorbent particles.

These problems are solved by the absorbent articles comprising the further features of independent claim 1 and claim 3, respectively.

- 3.3.2 The Appellant submitted that a skilled person starting from D3 would arrive in an obvious manner at the claimed subject matter without involvement of an inventive step. In this respect the Appellant relied on the disclosure in D3, column 3, lines 10 to 13, which would lead the skilled person to increase the quantity of superabsorbent in the place where it was needed. However, as can be derived from claim 1 of that document as well as column 3, lines 48 to 56, the supply of superabsorbent is controlled in such a manner that the concentration is highest in the area of reinforcement of the fibrous layer in the crotch portion of the diaper. There is neither an indication to position the bulk of the superabsorbent at a different position nor to change the supplied profile which, in accordance with the mentioned pulsating supply would be a symmetric bulge (sinus or Gauss

curve), as was also admitted by the appellant.

No indication can be derived from D3 towards an arrangement of the superabsorbent in the specific distribution profile having a general shape of an inverted spoon with a bowl section having relatively higher concentrations of superabsorbent particles and a handle section having relatively lower concentrations of superabsorbent, said bowl section positioned toward a front waistband edge of said absorbent article (claim 1).

3.3.3 Considering the subject-matter of claim 3 it is to be noted that according to D3 the maxima of weight of superabsorbent and fibers are coinciding or "in-phase". Any other form of a distribution profile cannot be derived from D3 because only a concentration maximum is mentioned which may have an ordinary form of a sinus- or Gauss-curve. Contrary to that teaching claim 3 requires that the regions having increased levels of superabsorbent are offset from the regions having increased levels of basis weight of hydrophilic fibers and that the quantity of superabsorbent particles is distributed along the article length with a particle distribution profile having a general shape of a plateau. Since D3 does not give any indication towards these particular profiles they are not obvious to a skilled person (Article 56 EPC).

3.3.4 The disclosure of D1, D2 and D4 does not come closer to the subject-matter according to claims 1 and 3 than D3, and therefore also cannot lead to the claimed solution.

D1 deals with a diaper wherein the superabsorbent is uniformly distributed in an area of oval shape

(Figures 1C, 1D). Any indication of a particular weight distribution profile of superabsorbent as claimed is lacking.

D2 does not show more than D1 in respect of the claimed invention because its teaching refers to the placement of superabsorbent particles in a uniform distribution in a selected area of a diaper (Figures 4, 5).

The diaper according to D4 is still more distant from the solution of the patent since a particular distribution profile of superabsorbent across the area of the absorbent article is not disclosed.

3.4 Summarizing, in the Board's judgment, the proposed solution to the technical problem underlying the patent in suit defined in the independent claims 1 and 3 is inventive and therefore these claims as well as their dependent claims 2 and 4 to 13 relating to particular embodiments of the invention in accordance with Rule 29(3) EPC, can form the basis for maintenance of the patent (Article 52(1) EPC).

Thus taking into account the amendments made by the Appellant, the patent and the invention to which it relates meet the requirements of the EPC and the patent as amended is maintained in this form (Article 102(3) EPC).

## **Order**

**For these reasons it is decided that:**

1. The decision under appeal is set aside.
2. The main request is rejected
3. The case is remitted to the first instance with the order to maintain the patent with the following documents:
  - claims 1 to 13 filed at the oral proceedings,
  - description columns 1 to 6, 15 to 18, 27 to 31 filed during oral proceedings together with description columns 7 to 14, 19 to 26 and
  - Figures 1 to 21 as granted.

The Registrar:

The Chairman:

M. Patin

P. Alting van Geusau