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**D E C I S I O N**  
**of 5 July 2001**

**Case Number:** T 0819/98 - 3.2.5

**Application Number:** 87309204.3

**Publication Number:** 0266109

**IPC:** B44C 5/04

**Language of the proceedings:** EN

**Title of invention:**

Decorative sheet material simulating the appearance of a  
base coat/clear coat paint finish

**Patentee:**

REXHAM INDUSTRIES CORPORATION

**Opponent:**

EVERY DENNISON CORPORATION

**Headword:**

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**Relevant legal provisions:**

EPC Art. 123(2), 84, 83, 54, 56

**Keyword:**

"Addition of subject-matter (no); clarity (yes); sufficiency  
of disclosure (yes); novelty (yes); inventive step (yes)"

**Decisions cited:**

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**Catchword:**

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Case Number: T 0819/98 - 3.2.5

**D E C I S I O N**  
**of the Technical Board of Appeal 3.2.5**  
**of 5 July 2001**

**Appellant:** AVERY DENNISON CORPORATION  
(Opponent) 150 North Orange Grove Boulevard  
P.O. Box 7090  
Pasadena, California 91109 (US)

**Representative:** Meyer-Plath, Henning, Dr.  
Grünecker, Kinkeldey  
Stockmair & Schwanhäusser  
Anwaltssozietät  
Maximilianstrasse 58  
D-80538 München (DE)

**Respondent:** REXHAM INDUSTRIES CORPORATION  
(Proprietor of the patent) P.O. Box 2528  
Charlotte, North Carolina 28247 (US)

**Representative:** MacDougall, Donald Carmichael  
Cruikshank & Fairweather  
19 Royal Exchange Square  
Glasgow G1 3AE, Scotland (GB)

**Decision under appeal:** Interlocutory decision of the Opposition Division  
of the European Patent Office posted 25 May 1998  
concerning maintenance of the European Patent  
No. 0 266 109 in amended form.

**Composition of the Board:**

**Chairman:** W. Moser  
**Members:** P. E. Michel  
C. G. F. Biggio

## Summary of Facts and Submissions

I. The appellant (opponent) lodged an appeal against the interlocutory decision of the Opposition Division, maintaining the patent No. 0 266 109 in amended form.

In the decision under appeal, it was held that the grounds of opposition submitted by the appellant under Article 100(a) EPC (lack of novelty and inventive step) did not prejudice the maintenance of the patent as amended. The further grounds of opposition under Articles 100(b) EPC (insufficiency of disclosure) and 100(c) EPC (added subject-matter) were regarded as being late filed and, in the absence of a prima facie case, were disregarded under Article 114(2) EPC.

II. The following documents were referred to in the appeal proceedings:

D1: US-A-4 451 522

D3: US-A-3 949 139

D4: Chemical Week/July 4, 1984, Vol. 135, No. 1,  
pages 30 to 36

D7: GB-A-2 084 513

D19: "Fluoropolymer Gives Ford Flair", British Plastics  
and Rubber (October 1983)

D20: "Solvent-cast Films", Plastics Engineering,  
May 1983

D22: US-A-4 248 762

D23: EP-A-232 959

D26: Winton Report

D27: Table of Test Scores

D28: Winton Testimony

D29: Rutkiewicz Affidavit

D30: Buehne Affidavit

D31: Fields Declaration

D32: Truog Affidavit and appended test report

III. Oral proceedings were held before the Board of Appeal on 5 July 2001.

IV. The appellant requested that the decision under appeal be set aside and that the patent be revoked.

The respondent (patentee) requested that the appeal be dismissed.

V. Claim 1 of the patent as maintained by the Opposition Division reads as follows:

"1. A flexible decorative sheet material (10), for use in surfacing automobile body panels and the like, the finished sheet material (10) comprising a solid substantially clear film outer layer (11) and a flexible solid opaque and uninterrupted pigmented polymer layer (12), characterized in that said sheet material (10) has the appearance

of a base coat/clear coat paint finish when viewing the outer surface thereof, and the substantially clear film outer layer (11) is preformed and is formed of a flexible cast substantially molecularly unoriented weatherable polymer selected from the group consisting of fluoropolymers, acrylate polymers, vinyl polymers, and blends thereof, and the pigmented polymer layer (12) is formed on the undersurface of said preformed film outer layer (11) and is visible therethrough, said pigmented polymer layer (12) having reflective flakes (14) uniformly distributed therein and oriented generally parallel to said outer layer (11) to impart to the sheet material (10) the appearance of a base coat/clear coat paint finish."

Claim 6 is directed to a shaped article having such a decorative sheet material adhered thereto and claim 10 is directed to a method for making such a decorative sheet material.

VI. In the written and oral procedure, the appellant argued essentially as follows.

The features "cast" and "weatherable" contained in independent claims 1 and 6 are not disclosed in the application as filed. Hence, the subject-matter of these claims does not meet the requirements of Article 123(2) EPC.

The term "the appearance of a base coat/clear coat paint finish" is not a distinguishing limiting technical feature. Consequently, it should be disregarded as a distinctive claim limitation as

regards independent claims 1 and 6. Such an interpretation gives rise to independent claims 1 and 6 encompassing polymer formulations that, according to document D30, result in unacceptable products. It follows that the alleged invention cannot be performed in the whole range of independent claims 1 and 6. Hence, according to the case law of the EPO, there is insufficiency of disclosure.

According to independent claims 1 and 6, the reflective flakes "impart to the sheet material (10) the appearance of a base coat/clear coat paint finish". In the decision under appeal it is held that from document D4 it is known in the art that the appearance of a base coat/clear coat paint finish means a high gloss, wet-look finish. However, it is clear that document D4 uses the term "a high gloss, wet-look finish" to describe the appearance properties of paint finishes in general, including monocoat paint films.

It is inaccurate to equate the appearance of a base coat/clear coat paint finish with high gloss and high "distinctness of image" (DOI), because monocoat paint finishes can also be equated with high gloss and high DOI. Furthermore, the patent in suit does not provide any measurable values or objective standards with respect to the undefined terms "gloss", "DOI" and "wet-look". Thus, the claimed appearance is meaningless to a person skilled in the art. Finally, given the passage "said pigmented polymer layer (12) having reflective flakes (14) uniformly distributed therein and oriented generally parallel to said outer layer (11) to impart to the sheet material (10) the appearance of a base coat/clear coat paint finish" in the text of independent claims 1 and 6, and the

description at column 1, lines 1 to 50 of the patent in suit, the alleged invention is more concerned with the metallic appearance of properties of flop or perhaps brightness and hue, as opposed to gloss or DOI.

It is meaningless as a technical limitation of the claims to define the appearance of a base coat/clear coat paint finish with respect to a given flake angle.

The patent in suit does not provide a teaching which enables the person skilled in the art to provide a sheet material having the qualities of a base coat/clear coat paint finish produced by spraying in terms of appearance. In particular, the polymer composition, the flake composition, the flake size and distribution, the temperatures and rates of cooling used, all have an effect on the appearance of the material and should therefore be disclosed in the patent in suit. This assessment is further confirmed by the test results disclosed in document D26, which clearly demonstrate that the appearance of a base coat/clear coat paint film cannot be evaluated with any reasonable level of reliability by subjective visual evaluation of such optical characteristics as head-on-brightness, DOI, gloss, and flop, to name just a few. The inherent subjective nature, and therefore indefiniteness, of visual evaluations of paint films is even acknowledged by the respondent. Thus, the application upon which the patent in suit is based does not comply with the requirements of Article 83 EPC.

Since the term "the appearance of a base coat/clear coat paint finish" is to be disregarded as a distinctive claim limitation, the subject-matter of independent claims 1 and 6 lacks novelty in view of the

disclosure of document D3. This document discloses a precoated weatherable outer clear coat made from an acrylic polymer and a sprayable base coat layer comprising a solvent-based acrylic polymer containing reflective flakes. Thus, document D3 discloses a sheet material having all the features of claims 1 and 6; and, although there is no specific reference to the material having the appearance of a base coat/clear coat paint finish, this is inevitable in the absence of any structural differences between the material of document D3 and that claimed in claims 1 and 6.

If the term "the appearance of a base coat/clear coat paint finish" is disregarded as a distinctive claim limitation, the subject-matter of claims 1 and 6 also lacks novelty in view of the disclosure of documents D7, D22 and D23.

If the subject-matter of claim 1 is regarded as being novel, it nevertheless lacks an inventive step. The problem facing the person skilled in the art is to avoid the disadvantages of spraying techniques. The solution is to use the materials made available by the disclosure of document D3. The claims of the patent in suit also lack an inventive step in view of the combinations of documents D1 and D3 and D7 and D20, respectively.

VII. In the written and oral procedure, the respondent argued essentially as follows.

The arguments under Articles 83 and 84 EPC constitute fresh grounds of appeal which were not raised before the Opposition Division and should therefore not be admitted. Further, Article 84 EPC does not constitute a



ground of opposition. In addition, the objections of lack of novelty over document D7, lack of inventive step over the combination of D1 and D3, and lack of inventive step over the combination of D7 and D20 were also neither raised by the appellant nor considered during the proceedings before the Opposition Division. Since the respondent does not consent to the introduction of these fresh grounds, the appeal should be dismissed.

The features "cast" and "weatherable" contained in independent claims 1 and 6 are disclosed in claims 7 and 8 of the application as filed, the remainder of these claims also having been incorporated in independent claims 1 and 6.

The patent in suit provides a teaching which enables the person skilled in the art to provide a sheet material having the appearance of a base coat/clear coat paint finish. There is no evidence to suggest that this is not achievable or that coatings exist whose appearance cannot be identified by a skilled person. The experiments referred to in document D30 fail to follow the teaching of the patent in suit and are therefore irrelevant. Document D31 indicates that the skilled person is able to ascertain whether or not an article has the appearance of a base coat/clear coat paint finish.

Document D3 does not disclose a sheet material having the appearance of a base coat/clear coat paint finish. This document merely discloses a hot stamp tape used to give small plastic components in vehicle interiors a metallic appearance. In addition, the pigment is always in a different layer from the platelets. Moreover, the

features of the reflective flakes being uniformly distributed and oriented generally parallel to the outer layer are absent from document D3.

In Table III, at column 8 of document D3, the tape is compared with brushed aluminium. There is nothing in document D3 which would suggest that the material disclosed therein would be suitable to provide the appearance of a base coat/clear coat paint finish.

## **Reasons for the Decision**

### 1. *Amendments*

Claims 1 and 6 refer to the substantially clear film outer layer (11) as being "formed of a flexible cast substantially molecularly unoriented weatherable polymer". It was objected that the features "cast" and "weatherable" were not disclosed in the application as filed. That is not correct. In fact, these features are disclosed on page 6, lines 10 to 12 and lines 15 to 17, respectively, of the application as filed.

Moreover, since technically limiting features have been added, the scope of protection conferred by independent claims 1, 6 and 10 is more limited than that of independent claims 1, 9 and 15 as granted.

The claims meet the requirements of Article 123(2), (3) EPC.

### 2. *Interpretation of independent claims 1 and 6*

Prior to the substantive examination (Articles 83, 54,

56 EPC) of the subject-matter claimed, an objective assessment of the content of independent claims 1 and 6 has to be made. More precisely, it has to be established in the present case whether or not the term "the appearance of a base coat/clear coat paint finish" constitutes a distinctive limiting technical feature. This term will therefore have to be construed in the light of the description and drawings of the patent in suit (cf. Case Law of the Boards of Appeal of the EPO, 3rd edition, 1998, chapter II.B.4).

Claims 1 and 6 specify that the pigmented polymer layer has reflective flakes uniformly distributed therein and oriented generally parallel to the outer layer (11) so as "to impart to the sheet material (10) the appearance of a base coat/clear coat paint finish".

Whilst it is possible to quantify the appearance of a material by the use of parameters such as gloss and DOI, it is not considered that the present case is such as to make it possible to supply numerical values of these parameters which would inevitably give rise to the desired result. What is claimed is a flexible sheet material which, when applied to a shaped article, such as the bodywork of a car, will give the appearance of a finish which is conventionally obtained by applying first a base coat and subsequently a clear coat by spraying. Thus, for example, as can be inferred from document D4, page 33, left-hand column, lines 11 to 21, this term is used to refer to a topcoat which is distinct from "metallic" finishes which contain aluminium flakes in order to achieve a glossy appearance but do not include a clear topcoat. In addition, the orientation of the flakes in such finishes is not specified.

Document D29 indicates that the individual optical characteristics discussed therein cannot be used to determine whether or not a finish has the specified appearance. It is further stated that single coat finishes may possess high gloss and high DOI, thus emphasizing the difficulties in defining the appearance of a base coat/clear coat paint finish in terms of numerical parameters. However, it is also stated in this document that "it is recognized that automobile appearance specifications exist for base coat/clear coat paint finishes" (cf. page 5, second full paragraph, lines 1 and 2).

Documents D26, D27 and D28 similarly confirm the difficulties in establishing exact values of individual parameters such as brightness, DOI, gloss and flop. This does not, however, mean that the term "appearance of a base coat/clear coat paint finish" is meaningless.

On the one hand, in document D31 it is stated that the meaning of the term "appearance of a base coat/clear coat paint finish" is readily understood (cf. page 3, point 8). On the other hand, an opposing opinion is given in document D29 (cf. page 5, second full paragraph), where it is stated that "it would require complete guesswork to determine whether" or not such an appearance has been achieved. This opposing opinion cannot be accepted. Whilst not placing more weight on one generalised statement rather than the other, it is the opinion of the Board that, although there exist borderline cases where two observers may disagree as to whether or not this appearance has been achieved, the term nevertheless remains such as to be capable of characterising the nature of the sheet material. The term is thus to be regarded as a distinct limiting

technical feature.

3. *Insufficiency of disclosure (Article 100(b) EPC)*

It is clear from the decision under appeal, points 2.5 to 2.8 of the Reasons, that the objection under Article 100(b) EPC was actually examined to a certain extent by the Opposition Division before deciding that there was no *prima facie* case. In these circumstances, it is, at the least, appropriate for the Board to consider whether or not the Opposition Division had correctly exercised its discretion not to admit the ground under Article 100(b) EPC. Furthermore, it has to be borne in mind that, in accordance with decision G 10/91 (OJ EPO 1993, 420), point 19 of the Reasons, new grounds can be considered by the Board, because of amendments of independent claims 1 and 6 in the course of opposition proceedings. It has thus to be examined whether the patent in suit discloses the subject-matter of claims 1 and 6 in a manner sufficiently clear and complete for it to be carried out by a person skilled in the art in accordance with Article 83 EPC.

Documents D30 and D32 have been adduced by the appellant in order to show that the teaching of the patent in suit does not give rise to the desired results. From these documents it follows that there exist polymers "selected from the group consisting of fluoropolymers, acrylate polymers, vinyl polymers, and blends thereof" which would not be regarded as being "weatherable" and which would exhibit a poor optical performance in terms of gloss or DOI when subjected to elevated temperatures and thermoforming. Thus, within the ranges of polymeric materials claimed in independent claims 1 and 6 of the patent in suit, there

are formulations which are unable to achieve the objectives of the claimed invention. Whilst this may be the case, the person skilled in the art would not have any difficulty selecting such polymers which would be weatherable, and hence suitable for surfacing automobile body panels, and which would also exhibit the required optical performance when subjected to elevated temperatures and thermoforming.

Documents D30 and D32 refer to tests in which sheet materials were prepared which did not possess the desired gloss and DOI. However, as pointed out in document D31, these failures may well arise from the method used to combine the base coat and clear coat, or from the use of an insufficiently smooth casting sheet onto which the base coat and clear coat are cast.

In the opinion of the Board, the person skilled in the art attempting to carry out the teaching of the patent in suit could produce a sheet material having the desired qualities without undue burden. In the case of the inadequate results as disclosed in documents D30 and D32, routine attempts could be made to improve the results, for example by the use of a smoother casting sheet and the use of different application techniques for the coatings.

The invention is thus disclosed in a manner which is sufficiently clear and complete for it to be carried out by a person skilled in the art, so that the requirements of Article 83 EPC are met.

4. The respondent argued that the objections of lack of novelty over document D7, lack of inventive step over the combination of D1 and D3, and lack of inventive

step over the combination of D7 and D20 represented fresh grounds and objected to their introduction into the appeal proceedings. However, the opposition has already been substantiated on the grounds of lack of novelty and inventive step. The fact that, during appeal proceedings, new arguments concerning the objections of lack of novelty and lack of inventive step were presented by the appellant does not give rise to fresh grounds within the meaning of decision G 10/91 (cf. point 3 above), the introduction of which could be objected to by the respondent.

5. *Novelty*

It was alleged on behalf of the appellant that the subject-matter of independent claims 1, 6 and 10 is not novel having regard to the disclosure of documents D3, D7, D22 and D23. Document D3 discloses a hot stamp tape having a highly reflective metallic finish. Documents D7, D22 and D23 disclose ornamental sheets for application to vehicle trim. It is in the nature of such products that they do not attempt to achieve the appearance of a base coat/clear coat paint finish which is associated with use on car body panels.

The argument that there are no structural differences between the material of document D3 and that claimed in independent claims 1, 6 and 10 is not accepted. The fact that these claims are limited to materials having appearance of a base coat/clear coat paint finish implies a structure in which this is achieved. Such a structure is not present in the material of document D3, which is a tape having a reflective metallic appearance.

The subject-matter of claims 1 to 13 is novel with respect to the disclosure of the cited prior art.

6. *Inventive step*

6.1 Closest prior art

The closest prior art is regarded as being the application of base coat/clear coat paint finishes by spraying on a shaped article such as an automobile body panel. In order to apply such coatings by spraying it is necessary to use a solvent which can give rise to pollution problems arising from evaporation (see patent in suit, column 1, lines 41 to 44).

6.2 Object of the invention

The object of the invention is thus to enable the production of a decorative finish having the appearance of a base coat/clear coat paint finish whilst avoiding such pollution problems.

6.3 Solution

The above object is achieved by the provision of a sheet material as defined in independent claim 1 which can be adhered to a shaped article.

Neither the decorative sheets and tapes disclosed in the cited prior art documents D3, D7, D22 and D23, nor the solvent-cast film disclosed in document D20 possess the desired appearance of a base coat/clear coat paint finish. There is thus no suggestion that such articles could be used in place of the conventional spraying techniques and result in a finish having the desired



characteristic appearance.

The subject-matter of claim 1 thus involves an inventive step.

6.4 Claims 2 to 5 are appendant to claim 1 and specify preferred features of the sheet material. Claim 6 is directed to a shaped article comprising the sheet material of claim 1 adhered to a supporting substrate. Claims 7 to 9 are appendant to claim 6 and specify preferred features of the shaped article. Claim 10 is directed to a method of making the sheet material of claim 1. Claims 11 to 13 are directly or indirectly appendant to claim 10 and specify preferred features of the method. These claims thus similarly involve an inventive step.

## **Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

M. Dainese

W. Moser