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**D E C I S I O N**  
**of 19 March 2003**

**Case Number:** T 0600/00 - 3.3.3

**Application Number:** 91303064.9

**Publication Number:** 0453149

**IPC:** C08F 220/20

**Language of the proceedings:** EN

**Title of invention:**  
Casting composition

**Patentee:**  
Sola International Holdings Limited

**Opponent:**  
Mitsubishi Rayon Co., Ltd.

**Headword:**  
-

**Relevant legal provisions:**  
EPC Art. 84, 123(2)

**Keyword:**  
"Claims - clarity (no)"  
"Amendments - added subject-matter (yes)"

**Decisions cited:**  
T 0002/80

**Catchword:**  
-



Case Number: T 0600/00 - 3.3.3

**D E C I S I O N**  
**of the Technical Board of Appeal 3.3.3**  
**of 19 March 2003**

**Appellant:** Sola International Holdings Limited  
(Proprietor of the patent) Sherriffs Road  
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**Representative:** Towler, Philip Dean  
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**Respondent:** Mitsubishi Rayon Co., Ltd.  
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**Representative:** Hansen, Bernd, Dr. Dipl.-Chem.  
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**Decision under appeal:** Decision of the Opposition Division of the  
European Patent Office posted 13 April 2000  
revoking European patent No. 0 453 149 pursuant  
to Article 102(1) EPC.

**Composition of the Board:**

**Chairman:** R. Young  
**Members:** W. Sieber  
J. Van Moer

## Summary of Facts and Submissions

I. The mention of the grant of European patent No. 0 453 149, with 21 claims, in respect of European patent application No. 91 303 064.9, filed on 8 April 1991 and claiming an Australian priority of 20 April 1990 (AU 9746/90), was published on 15 March 1995 (Bulletin 1995/11). Claim 1 read as follows:

"1. A cross-linkable polymeric casting composition characterised in that the composition includes:  
as component (A), a polyoxyalkylene glycol diacrylate or dimethacrylate;  
as component (B), a monomer having a recurring unit derived from at least one radical-polymerisable bisphenol monomer capable of forming a homopolymer having a refractive index of more than 1.55; and  
as component (C), a urethane monomer having 2 to 6 terminal groups selected from acrylic groups and methacrylic groups."

Claims 2 to 20 were directed to elaborations of the casting composition of Claim 1.

Claim 21, an independent claim, was directed to a polymeric optical article formed from a casting composition as claimed in any one of Claims 1 to 20 and having a refractive index in the mid refractive range of from approximately 1.51 to 1.57.

II. A notice of opposition was filed on 13 December 1995, on the grounds of Article 100(a) EPC (lack of novelty and lack of inventive step). The opposition was supported *inter alia* by the following documents:

D1: JP-A-01-209401 (with full English translation);

D3: EP-A-0 269 366.

III. By a decision announced orally on 4 April 2000 and issued in writing on 13 April 2000, the opposition division revoked the patent.

The decision of the opposition division was based on two sets of claims, both submitted at the oral proceedings of 4 April 2000, forming a main request (Claims 1 to 14) and an auxiliary request (Claims 1 to 11), respectively. Claim 1 of the main request read as follows:

"1. A cross-linkable polymerisable casting composition characterised in that the composition includes:  
as component (A), a polyoxyalkylene diacrylate or dimethacrylate having from 6 to 14 alkylene oxide repeating units, component (A) optionally further comprising a polyoxyethylene dimethacrylate having an average number of 3 to 5 ethylene oxide units, in an amount of from 5 to 30% by weight, based on the total weight of the casting composition, component (A) being present in an amount of 20 to 45% by weight based on the total weight of the casting composition;  
as component (B), a monomer having a unit derived from at least one radical-polymerisable bisphenol monomer capable of forming a homopolymer having a refractive index of more than 1.55, said monomer being present in an amount of 20 to 55% by weight, based on the total weight of the casting composition, component (B) optionally further comprising a secondary high index monomer other than a high index bisphenol monomer to modify the overall refractive index of the optical

article formed therefrom, the secondary high index monomer component being present in an amount of from 5 to 20% by weight based on the total weight of the casting composition, and selected from styrene and derivatives thereof; high index acrylate and methacrylate esters; and n-vinyl pyrrolidine; as component (C), a urethane monomer having 2 to 6 terminal groups selected from acrylic groups and methacrylic groups, said component (C) being present in an amount of 2.5 to 20% by weight based on the total weight of the casting composition."

Claims 2 to 13 were dependent claims, the features of which corresponded to those of granted Claims 2, 3, 5, 8 to 11, 14, 16, and 18 to 20, respectively. Claim 14 was an independent claim the terms of which reflected those of Claim 21 as granted.

Claim 1 of the auxiliary request differed from Claim 1 of the main request in that the wording "... the composition includes ..." had been amended to "... the composition consists of ..." and that two optional features had been added at the end of the claim, ie "... and optionally a cross-linking initiator selected from heat initiators, ultraviolet initiators and combinations of heat and ultraviolet initiators and optionally from 1 to 10% by weight of an aliphatic glycol dimethacrylate or diacrylate".

Claims 2 to 10 were dependent claims, the features of which corresponded to granted Claims 2, 3, 5, 8 to 11, 14 and 16, respectively. Claim 11 was an independent claim, the terms of which reflected those of Claim 21 as granted.

According to the decision:

- the subject-matter of the main request did not involve an inventive step; and
- the subject-matter of the auxiliary request did not fulfil the requirements of Article 123(2) EPC.

IV. On 13 June 2000, a notice of appeal against the above decision was filed by the proprietor (hereinafter referred to as the appellant), the prescribed fee being paid on the same day.

The statement of grounds of appeal, filed on 28 August 2000, was accompanied by three sets of claims forming a main request and a first to third auxiliary request, respectively.

V. With a submission filed on 13 December 2000, the opponent (hereinafter referred to as the respondent) requested that the appeal be dismissed and raised various objections against the main request and the first to third auxiliary request. In particular, the main and the first auxiliary request were broader in certain respects than requests which had already been refused by the first instance. Furthermore, objections under Article 123(2) EPC were raised against the first and the third auxiliary request, objections under Article 84 EPC were raised against Claim 1 of all the requests and objections under Article 56 EPC were raised against the main and the second auxiliary request.

VI. In a communication dated 10 October 2002 accompanying a summons to oral proceedings, the salient issues were

identified by the board as being, firstly, clarity of Claim 1 of all requests, secondly, the amendments in the first and third auxiliary request, and thirdly, whether the claimed subject-matter of all requests was inventive in view of D3 which appeared to be the closest prior art.

- VII. In reply, the appellant withdrew all the previous claim sets and filed on 19 February 2003 a new main claim set and ten auxiliary claim sets accompanied by reasons as to why the new claim sets met the requirements of Articles 84, 123 and 56 EPC. The submissions were supplemented by a declaration signed by Dr Toh which detailed certain experiments which had been carried out and which showed that the properties of lenses made from the casting compositions of the present invention were significantly better than could have been expected on the basis of the prior art cited. Attached was also an extract from *"Tomorrow's World: The Australian Initiative"* to demonstrate the breakthrough nature of the claimed invention.
- VIII. Further submissions regarding the appeal and some minor amendments of an editorial nature in the main request, the eighth and ninth auxiliary request were filed on 10 March 2003. In two letters filed on 11 March 2003 and on 14 March 2003, the appellant submitted reasons as to why the material filed on 19 February 2003 should be admitted.
- IX. The respondent objected against the exceedingly late filed material dated 19 February 2003 (two letters filed on 10 March 2003 and 13 March 2003, respectively) and requested that:

1. The appellant's submissions dated 19 February 2003 be not considered for further consideration.
  2. In case the above request (1) cannot be granted, then the oral proceedings scheduled for 19 March 2003 be postponed.
- X. In a communication sent by fax on 14 March 2003, the board informed the parties that it would rule on requests 1 and 2 in the respondent's submission filed on 13 March 2003 at the oral proceedings to be held on 19 March 2003. Thus, oral proceedings would take place as scheduled.
- XI. Oral proceedings were held on 19 March 2003. At the oral proceedings, the respondent no longer contested the admissibility of the main request or that of the first to seventh auxiliary requests filed on 19 February 2003, since these involved only minor modifications of the claims previously on file, and represented a fair attempt to meet the objections already raised. The respondent did, however, maintain its objection to the introduction of the eighth, ninth and tenth auxiliary requests, since these, being directed to specific examples of the patent in suit, represented a radical departure from the type of claim hitherto in the proceedings and thus carried new implications which were difficult to assess. The respondent also maintained its objection to the introduction of the late filed experimental evidence (Declaration of Dr Toh) and the late filed document "*Tomorrow's World: The Australian Initiative*".

In the course of the oral proceedings and as a result of the points raised in relation to the admissibility



of the remaining eighth to tenth auxiliary requests, the appellant submitted two further sets of claims 1 and 2, respectively, forming an eleventh and a twelfth auxiliary request, as well as a document concerning the identity of ATM 20, a component (B) in Claim 1 of the latter requests.

XII. The appellant requested that the decision under appeal be set aside and that the patent be maintained:

- on the basis of the main request comprising 11 claims filed on 19 February 2003, or, in the alternative,
- on the basis of one of the auxiliary claim sets in a cascade manner with

first auxiliary request:

Claims 1 and 2 filed on 10 March 2003,  
Claims 3 to 10 filed on 19 February 2003;

second to seventh auxiliary request:

all filed on 19 February 2003;

eighth auxiliary request:

Claims 1 to 5, 9 (partially) filed on 19 February 2003,  
Claims 6 to 9 (partially) filed on 10 March 2003;

ninth auxiliary request:

Claims 1 to 3 (partially), 6 (partially) and 7

filed on 19 February 2003,  
Claims 3 to 6 (partially) filed on 10 March 2003;

tenth auxiliary request:

Claims 1 and 2 filed on 19 February 2003;

eleventh auxiliary request:

Claims 1 and 2 submitted at the oral proceedings;

twelfth auxiliary request:

Claims 1 and 2 submitted at the oral proceedings.

Claim 1 of the main request reads as follows:

"1. A cross-linkable polymerisable casting composition characterised in that the composition consists of:  
as Component (A), a polyoxyalkylene diacrylate or dimethacrylate having from 6 to 14 alkylene oxide repeating units, component (A) optionally further comprising a polyoxyethylene dimethacrylate having an average number of 3 to 5 ethylene oxide units, in an amount of from 5 to 30% by weight, based on the total weight of the casting composition, component (A) being present in an amount of 20 to 45% by weight based on the total weight of the casting composition;  
as Component (B), a monomer having a unit derived from at least one radical-polymerisable bisphenol monomer capable of forming a homopolymer having a refractive index of more than 1.55, said monomer being present in an amount of 20 to 55% by weight, based on the total weight of the casting composition;  
as Component (C), a urethane monomer having 2 to 6

terminal groups selected from acrylic groups and methacrylic groups, said component (C) being present in an amount of 2.5 to 20% by weight based on the total weight of the casting composition;  
a cross-linking initiator selected from heat initiators, ultraviolet initiators and combinations of heat initiators and ultraviolet initiators;  
and optionally from 1 to 10% by weight of an aliphatic glycol dimethacrylate or diacrylate."

Claims 2 to 10 are dependent claims the features of which correspond to those of Claims 2 to 10, respectively, of the main request underlying the decision under appeal. Claim 11, an independent claim, corresponds to Claim 14 of the latter request, subject to the limitation of the refractive index range from "1.51 to 1.57" to "1.53 to 1.57".

The first auxiliary request corresponds to the main request, except that only claims to polymeric optical articles are included. Claim 1 of this request corresponds to Claim 11 of the main request.

The second auxiliary request corresponds to the main request, except that in Claim 1 the cross-linking initiator is limited to an ultraviolet initiator.

The third auxiliary request corresponds to the second auxiliary request, except that only claims to polymeric optical articles are included. Claim 1 of this request corresponds to Claim 11 of the second auxiliary request.

The fourth auxiliary request corresponds to the main request, except that in Claim 1 the optional aliphatic

glycol dimethacrylate or diacrylate has been deleted.

The fifth auxiliary request corresponds to the fourth auxiliary request, except that only claims to polymeric optical articles are included. Claim 1 of this request corresponds to Claim 11 of the fourth auxiliary request.

The sixth auxiliary request corresponds to the fourth auxiliary request, except that in Claim 1 the cross-linking initiator is limited to an ultraviolet initiator.

The seventh auxiliary request corresponds to the sixth auxiliary request, except that only claims to polymeric optical articles are included. Claim 1 of this request corresponds to Claim 11 of the sixth auxiliary request.

The eighth auxiliary request is a set of nine independent claims reading as follows:

"1. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

- (A) 45% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;
- (B) 46% by weight of high index bisphenol A ethoxylated dimethacrylate;
- (C) 5% by weight of urethane tetracrylate U-4HA; and  
4% by weight of 1,3 butylene glycol dimethacrylate.

2. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

- (A) 45% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;
- (B) 45% by weight of high index bisphenol A ethoxylated dimethacrylate; and
- (C) 10% by weight of the urethane tetracrylate U-4HA.

3. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

- (A) 45% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;
- (B) 50% by weight of high index bisphenol A ethoxylated dimethacrylate; and
- (C) 5% by weight of the urethane tetracrylate U-4HA.

4. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

- (A) 35% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;
- (B) 30% by weight of high index bisphenol A ethoxylated dimethacrylate;
- 25% by weight of the halogenated high index

bisphenol compound NK534M; and

(C) 10% by weight of the urethane tetracrylate U-4HA.

5. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

(A) 20% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;

25% by weight of polyethylene glycol dimethacrylate having an average number of 4 ethylene oxide polymerised units;

(B) 45% by weight of high index bisphenol A ethoxylated dimethacrylate;

(C) 5% by weight of the urethane tetracrylate U-4HA; and

3% by weight of 1,3 butylene glycol dimethacrylate.

6. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

(A) 40% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;

(B) 40% by weight of the glycidyl ester of bisphenol A Bis GMA; and

(C) 20% by weight of the urethane monomer NF202.

7. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl

phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

- (A) 45% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;
- (B) 40% by weight of the glycidyl ester of bisphenol A Bis GMA; and
- (C) 15% by weight of the urethane monomer U-6HA.

8. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition, wherein the casting composition consists of:

- (A) 40% by weight of polyethylene glycol dimethacrylate having an average number of 9 ethylene oxide polymerised units;
- (B) 40% by weight of the halogenated high index bisphenol compound NK534M; and
- (C) 20% by weight of the urethane monomer U-6HA.

9. A polymeric optical article formed from a casting composition as claimed in any foregoing claim."

The ninth auxiliary request consists of seven independent claims, the subject-matter of which corresponds to that of Claims 2, 3, 4, 6, 7, 8 and 9, respectively, of the eighth auxiliary request.

The tenth auxiliary request consists of two claims corresponding to Claims 3 and 9, respectively, of the eighth auxiliary request.

The eleventh auxiliary request corresponds to the tenth

auxiliary request, except that the components (A), (B) and (C) in Claim 1 are defined as follows:

"(A) 45% by weight of polyethylene glycol dimethacrylate NK ester 9G  
(B) 50% by weight of high index bisphenol A ethoxylated dimethacrylate ATM 20; and  
(C) 5% by weight of the urethane tetracrylate U-4HA."

The twelfth auxiliary request corresponds to the tenth auxiliary request, except that Claim 1 reads as follows:

"1. A casting material consisting of a cross-linkable polymerisable casting composition together with methyl phenyl glyoxylate in an amount of 0.2% wherein the casting composition consists of:  
(A) 45% of polyethylene glycol dimethacrylate NK ESTER 9G which has an average molecular weight of 536;  
(B) 50% of high index bisphenol A ethoxylated dimethacrylate ATM 20; and  
(C) 5% of the urethane tetracrylate U-4HA."

XIII. The respondent requested that the appeal be dismissed.

### **Reasons for the Decision**

1. The appeal is admissible.
2. *Amendments; main request and first to seventh auxiliary requests*

Although, at the start of the oral proceedings, the request of the respondent that the appellant's



submissions dated 19 February 2003 be not admitted to the proceedings or, in the alternative, that the oral proceedings be re-scheduled (section IX., above) was before the board, the withdrawal by the respondent of its objection to the introduction into the proceedings of the sets of claims forming the main request and first to seventh auxiliary requests led the board first of all to consider the allowability of these requests, initially under Articles 84 and 123 EPC.

## 2.1 Main request

It is conspicuous to the board that Claim 1 has been amended extensively compared with Claim 1 of the patent in suit as granted. In particular, the claim is no longer directed to a composition characterised in that it **includes** certain components ((A), (B), (C) etc. (cf. section I, above), but rather to such a composition characterised in that it **consists of** such components, whereby the amended claim furthermore provides for certain additional components "optionally" to be present (section XII, above). Thus from a granted claim which defined a composition in an essentially inclusive way, an amended claim has arisen which defines the composition in an essentially exclusive way, whilst at the same time reserving the possibility of certain optional components being present.

2.1.1 The Board had already pointed out, in a communication issued in connection with the summons to oral proceedings, in relation to a claim then on file which contained a similarly exclusive formulation, that there was "no hint whatsoever in the application as originally filed to a composition consisting of components (A), (B) and (C) only." (paragraph 2.1 of

the communication). Nor was it contested by the appellant that the documents of the application as filed contained no explicit mention of compositions consisting only of the components and optional components in the level of generality now presented in Claim 1. In examining whether such a constellation as now claimed was implicitly disclosed in the application as filed, it is of course important to ascertain that such subject-matter is directly and unambiguously derivable from the documents of the application as originally filed. In other words, it should be possible to show that the amendments should be fully consistent with the disclosure as originally filed.

- 2.1.2 A comparison of the percentage ranges of the mandatory components (A), (B) and (C) of the composition claimed shows that they do not add up to 100%. In particular, taking the lowest percentage (20%) of component (B) results in a situation that the maximum permitted percentages (45% and 20%), respectively, of components (A) and (C) cannot reach 100%, since the sum of these figures is only 85%. This is not repaired even if an attempt to compensate the deficiency is made by allowing the maximum amount (10%) of the "optional" component (the aliphatic glycol dimethacrylate or diacrylate), since this would still only add up to 95%. In this connection, the "optional" component contained in the definition of component (A), which may be present in an amount of 5 to 30% by weight of the composition, cannot additionally contribute to reaching a total of 100%, since the claim specifies the total amount of component (A) as being 45% by weight. Nor did the appellant submit any argument as to why the board should regard the remaining discrepancy as negligible in the context of the disclosure of the patent in suit.

2.1.3 Whilst, according to the established case law of the boards of appeal, a claim containing such an inescapable inconsistency contravenes the provisions of Article 84 EPC (T 2/80, OJ EPO 1981, 431) and is therefore objectionable on this ground alone, the question arises in the present case as to what further implications this contradiction has for the allowability of the amendment that led to it.

2.1.4 It is quite evident, in the latter connection, that as long as the compositions according to Claim 1 were defined in inclusive terms, as was the case in the version as granted, the fact that the percentages of the mandatory components (A), (B), (C) did not necessarily add up to 100% was of no consequence for the clarity of the claim, since any deficiency would be made up by further unspecified optional components, many of which were listed in the patent in suit and none of which was prohibited by the terms of the claim (page 6, line 39 to page 7, line 59).

2.1.5 Once the claim had been limited to exclude all the components it did not explicitly mention, however, the possibility of such "compensation" was no longer permitted. To this extent, therefore, the emergence of the inescapable contradiction predicated by the percentages specified for the components (A), (B) and (C) is, in the board's view, the outward sign that a constellation of such components as presented in the amendment was not inwardly contemplated in the application as originally filed, since it is indeed inconsistent with it.

2.1.6 If, in favour of the appellant, an attempt is made to discover if there are any positive indications in the

disclosure of the application as filed, as to which combinations of the mandatory and optional features now claimed had in fact been contemplated at the relevant filing date, it is necessary first of all to ascertain what combinations are represented by the claim. These are:

- (i) a composition consisting only of components (A), (B) and (C);
- (ii) a composition consisting only of components (A), (B), (C) plus the optional 1 to 10% by weight of aliphatic glycol dimethacrylate or diacrylate;
- (iii) a composition consisting only of components (A), (B), (C), the optional 1 to 10% by weight of aliphatic glycol dimethacrylate or diacrylate and the optional further component (A'), ie the polyoxyethylene dimethacrylate having 3 to 5 ethylene oxide units; and
- (iv) a composition consisting only of components (A), (B), (C) and the optional further component (A').

Closer examination of the examples of the patent in suit shows that whilst Examples 2, 3, 5, 8, 9 and 10 support combination (i), Example 1 supports combination (ii) and Example 6 supports combination (iii), there is no example illustrating combination (iv). In other words, the application as originally filed did not foreshadow any embodiment corresponding to one of the combinations now claimed.

2.1.7 Consequently, the subject-matter of Claim 1 not only lacks clarity (sections 2.1.2, 2.1.3, above), but also cannot be derived in a direct and unambiguous way from the disclosure of the application as originally filed. Thus the main request fails to meet the requirements of Article 123(2) EPC as well as of Article 84 EPC. Hence, the main request was refused.

2.2 First to seventh auxiliary requests

Claim 1 of all these requests contains the same constellation of mandatory and optional features in the same ranges of percent by weight as Claim 1 of the main request. The same conclusions apply, therefore, to these requests as was reached by the board in relation to the main request. Consequently, the first to seventh auxiliary requests were refused.

3. *Eighth auxiliary request*

The eighth auxiliary request differs from each of the main request and first to the seventh auxiliary requests in that, instead of being directed to a class of compositions defined in one independent claim and a number of dependent claims, it is directed to the subject-matter of respective worked examples in a corresponding number (eight) of independent claims.

3.1 Whilst the claims of this request which are directed to a cross-linkable casting composition define the components (A), (B) and (C) thereof as being present in amounts expressed in percent by weight, the claim requires the composition to be "together with methyl phenyl glyoxylate in an amount of 0.2% by weight, based on the weight of the casting composition".

3.1.1 Closer examination of the examples relied upon as a basis for these claims shows, however, that the amounts of each of the components (A), (B) and (C), although expressed in terms of percentages in Example 1, are not expressed in percentages "by weight", as now required in the claims. This lack of statement of a basis is reflected in the remaining Examples 2 to 23, in which the amounts of the components (A), (B) and (C) are merely mentioned as figures, eg "45/45/10" in the case of Example 2, without any mention either of percentage or of a basis. That these must necessarily be percentages is contradicted in Example 6, in which the figures given are "20/25/45/3", which only add up to 98.

3.1.2 As regards the "0.2% by weight" of initiator, furthermore, while this is presented in the claim as being based on the weight of the casting composition, ie as being based on the sum of the percentages of the components (A), (B) and (C) and thus as additional to the monomer mix, the description of the procedure carried out in Example 1 (which is repeated in the remaining Examples 2 to 23) states that "The monomer mix was prepared in a beaker **together with** 0.2% V55 as the U.V. initiator" (page 8, line 34; emphasis by the Board). Hence, it is apparent that there is not only no statement that the "0.2% of V55" is a percent by weight, but neither is there any clear statement that this 0.2% is based on the sum of the components mixed according to the example.

3.1.3 Although the appellant at the oral proceedings submitted that the initiator was always added to the ready-mixed monomers shortly before casting, the basis for including the curing initiator as a mandatory

feature in the claims of the earlier requests was stated to be original Claim 19, which is directed to "A casting composition according to any preceding claim, further comprising a cross-linking initiator selected from heat initiators, ultraviolet initiators and combinations of heat and ultraviolet initiators.". The terms of this claim are, in the board's view, rather such as to classify the curing initiator as part of the composition including the components (A), (B) and (C), than as additional to it. Thus, the submissions of the appellant appear to be contradictory on this point and thus leave doubt as to whether the basis of the "0.2%" of curing initiator is to be understood to be the monomer mix, or the monomer mix plus the initiator.

3.1.4 Although the board has considered carefully the argument of the appellant, that such percentages, whether of the monomer mix or of the curing initiator, would invariably have been understood by the skilled person to be percentages by weight, as is indeed corroborated, in general terms, in the statements of the ranges of the various components in the more general part of the disclosure of the patent in suit, this does not in itself assist in arriving at an unambiguous understanding of the relationship between the bases of the percentages of the components (A), (B) and (C) on the one hand, and of the curing initiator on the other.

3.2 In summary, the board considers that Claims 1 to 9 do not meet the requirements of Article 123(2) EPC.

4. *Ninth, tenth and eleventh auxiliary request*

Similar considerations apply to the ninth, tenth and eleventh auxiliary requests, since these all equally present a combination of percentages, the respective bases of which are not directly and unambiguously derivable from the application as filed. Thus, these requests also do not meet the requirements of Article 123(2) EPC.

5. *Twelfth auxiliary request*

In this request, all reference to "by weight" has been deleted. This results, however, in a claim in which no basis for any percentage is identified. Such a claim does not, in the board's view, meet the requirements of clarity of Article 84 EPC.

6. In view of the above, it is clear that none of the requests on file could be regarded as allowable. Therefore, the appeal must fail, and the questions of formal introduction into the proceedings of the eighth to twelfth requests is moot, since these requests are in any case clearly not allowable.

7. Consequently, it is equally unnecessary for the board to rule on the issue of introduction of the late filed experimental evidence and document, or, therefore, on the request of the respondent for a re-scheduling of the oral proceedings.



**Order**

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

The appeal is dismissed.

The Registrar:

The Chairman:

E. Görgmaier

R. Young