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**Datasheet for the decision
of 21 September 2010**

Case Number: T 1251/07 - 3.3.01

Application Number: 01962915.3

Publication Number: 1309599

IPC: C07F 7/08

Language of the proceedings: EN

Title of invention:
Surface-active photoinitiators

Applicant:
Ciba Holding Inc.

Headword:
Photoinitiators/CIBA

Relevant legal provisions:
EPC Art. 123(2), 82, 111(2)

Relevant legal provisions (EPC 1973):

-

Keyword:
"Art. 123(2) - requirements met for the main request"
"Unity of invention - reasons given do not apply"
"Remittal to the department of first instance for further
examination"

Decisions cited:
T 0034/90

Catchword:

-



Case Number: T 1251/07 - 3.3.01

D E C I S I O N
of the Technical Board of Appeal 3.3.01
of 21 September 2010

Appellant: Ciba Holding Inc.
Klybeckstrasse 141
CH-4057 Basel (CH)

Representative: -

Decision under appeal: Decision of the Examining Division of the
European Patent Office posted 10 May 2007
refusing European patent application
No. 01962915.3 pursuant to Article 97(1) EPC
1973.

Composition of the Board:

Chairman: P. Ranguis
Members: C. M. Radke
C.-P. Brandt

Summary of Facts and Submissions

I. The applicant filed an appeal against the decision of the Examining Division to refuse European patent application No. 01 962 915.3.

II. The documents cited during the examination proceedings included the following:

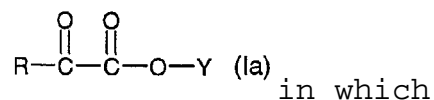
(D1) EP-A-0 161 830

(D3) WO-A-98/33 761

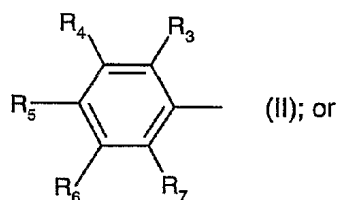
(D9) US-A-4 507 187.

III. The refusal was based on claims 1 to 12, filed with the letter dated 19 February 2007, claim 1 reading as follows:

"1. A compound of the formula Ia



R is radical of the formula II



R is naphthyl, anthracyl, phenanthryl or a heterocyclic radical, the radicals naphthyl, anthracyl, phenanthryl and the heterocyclic radical being unsubstituted or substituted by A-X-C₁-C₈alkyl, phenyl, OR₈, SR₉ and/or NR₁₀R₁₁, where the substituents OR₈, SR₉ and NR₁₀R₁₁ may form 5- or 6-membered rings via the radicals R₈, R₉, R₁₀ and/or R₁₁ with further substituents on the naphthyl,

anthracyl or phenanthryl ring or on the heterocycle or with one of the carbon atoms of the naphthyl, anthracyl or phenanthryl ring or with one of the carbon atoms of the heterocycle; with the proviso that at least one substituent A-X- is present in the radical R;

R₃, R₄, R₅, R₆ and R₇ independently of one another are hydrogen; A-X- unsubstituted C₁-C₁₂alkyl or C₁-C₁₂alkyl substituted by OH, C₁-C₄alkoxy, phenyl, naphthyl, halogen, CN and/or -O(CO)R₁₂; or are C₂-C₁₂alkyl interrupted by one or more non-successive oxygen atoms; or

R₃, R₄, R₅, R₆ and R₇ are halogen, OR₈, SR₉, NR₁₀R₁₁, unsubstituted or C₁-C₄alkyl- and/or C₁-C₄alkoxy-substituted phenyl, where the substituents OR₈, SR₉, NR₁₀R₁₁ may form 5- or 6-membered rings via the radicals R₈, R₉, R₁₀ and/or R₁₁ with further substituents on the phenyl ring or one of the carbon atoms of the phenyl ring; with the proviso that at least one radical R₃, R₄, R₅, R₆ or R₇ is A-X-;

R₈ and R₉ independently of one another are hydrogen; unsubstituted C₁-C₁₂alkyl or C₁-C₁₂alkyl substituted by OH, C₁-C₄alkoxy, phenyl, phenoxy and/or -O(CO)R₁₂; or are C₂-C₁₂alkyl interrupted by one or more non-successive oxygen atoms; or are unsubstituted phenyl, C₃-C₆alkenyl, cyclopentyl, cyclohexyl or naphthyl; or are C₁-C₄alkoxy-, phenyl- and/or C₁-C₄alkyl substituted phenyl, C₃-C₆alkenyl, cyclopentyl, cyclohexyl or naphthyl;

R₁₀ and R₁₁ independently of one another are hydrogen; unsubstituted C₁-C₁₂alkyl or C₁-C₁₂alkyl substituted by OH, C₁-C₄alkoxy and/or phenyl; or are C₂-C₁₂alkyl interrupted by one or more non-successive

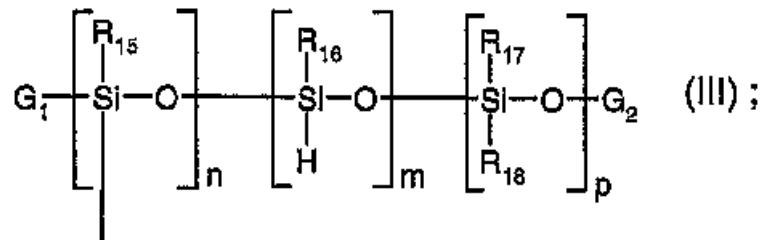
oxygen atoms; or are phenyl, $-(CO)R_{12}$ or SO_2R_{13} ; or R_{10} and R_{11} , together with the nitrogen atom to which they are attached, form a 5-, 6- or 7-membered ring which is uninterrupted or interrupted by $-O-$ or $-NR_{14}-$;

R_{12} is C_1-C_8 alkyl; unsubstituted phenyl or phenyl substituted by C_1-C_4 alkyl and/or C_1-C_4 alkoxy;

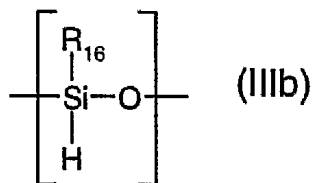
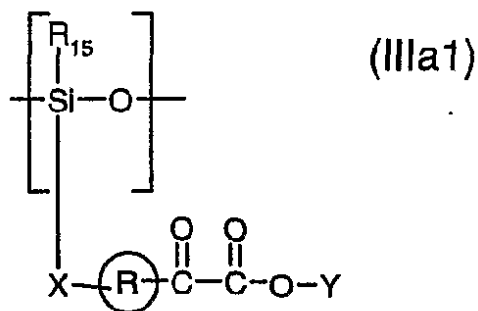
R_{13} is C_1-C_{12} alkyl, unsubstituted phenyl or phenyl substituted by C_1-C_4 alkyl;

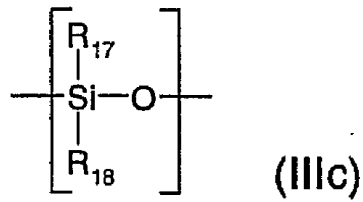
R_{14} is hydrogen; unsubstituted C_1-C_8 alkyl; C_1-C_8 alkyl substituted by OH or C_1-C_4 alkoxy ; unsubstituted phenyl; or phenyl substituted by OH, C_1-C_4 alkyl or C_1-C_4 alkoxy;

A is a surface-active radical of the formula III



in which the units IIIa1, IIIb and/or IIIc





are distributed randomly or in blocks and in which the circle is intended to show that an aromatic radical R as defined above is a divalent radical and is substituted via the bridges X with the corresponding silyl radical; or

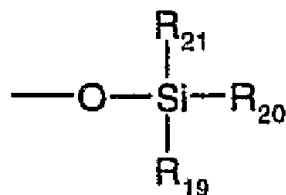
A is a surface-active radical A_0 ; where A_0 is C_6 - C_{30} alkyl, C_6 - C_{30} alkenyl, C_6 - C_{30} alkynyl, C_6 - C_{30} aralkyl, C_6 - C_{30} alkyl-(CO)-, C_6 - C_{30} alkenyl-(CO)-, C_6 - C_{30} alkynyl-(CO)-, C_6 - C_{30} aralkyl-(CO)-, C_6 - C_{30} alkyl-Si(R_{15})(R_{16})-, C_6 - C_{30} alkenyl-Si(R_{15})(R_{16})-, C_6 - C_{30} alkynyl-Si(R_{15})(R_{16})-, these radicals being unsubstituted or substituted by OH, C_1 - C_4 alkoxy, phenyl, naphthyl, halogen, CN, SR_9 , $NR_{10}R_{11}$ and/or $-O(CO)R_{12}$ and these radicals being uninterrupted or interrupted by one or more $-O-$, $-S-$ or $-NR_{14}-$;

n is a number from 1 to 1000 or, if the siloxane starting material is a mixture of oligomeric siloxanes, n may alternatively be less than 1 but greater than 0;

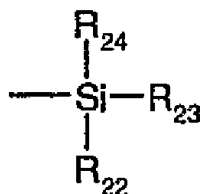
m is a number from 0 to 100;

p is a number 0-10 000;

G_1 is C_1 - C_{18} alkyl or a radical of the formula



G_2 is C_1 - C_{18} alkyl or a radical of the formula



with the proviso that, if $G_2 = \text{alkyl}$, the radical G_2 is attached directly to the silicon atom without an oxygen bridge; or

G_1 and G_2 together are a single bond;

R_{15} , R_{16} , R_{17} , R_{19} , R_{20} , R_{21} , R_{22} , R_{23} and R_{24} independently of one another are C_1 - C_{18} alkyl, phenyl, C_2 - C_6 -hydroxyalkyl, C_2 - C_6 -aminoalkyl or C_5 - C_8 cycloalkyl; R_{18} is unsubstituted C_1 - C_{18} alkyl, C_5 - C_8 cycloalkyl; or is C_1 - C_{18} alkyl substituted by hydroxyl, C_1 - C_{12} alkoxy, halogen, C_3 - C_8 cycloalkyl and/or $N(R_{10})(R_{11})$; or is unsubstituted phenyl or phenyl substituted by C_1 - C_{12} alkyl, C_1 - C_{12} alkoxy, halogen, hydroxyl and/or $N(R_{10})(R_{11})$;

X if A is a radical of the formula III, X is a single bond, C_1 - C_{10} alkylene, C_2 - C_{10} alkenylene, C_2 - C_{10} alkynylene, $-(CH_2)_a-O-$, $-O-(CH_2)_a-$, $-O-(CH_2)_a-O-$, $-(CH_2)_a-O-(CH_2)_b-$, $-(CH_2)_a-O-(CH_2)_b-O-$, $-(CH_2)_a-NR_{14}-(CH_2)_b-$, $-(CH_2)_a-NR_{14}-$, $-(CH_2)_a-O-(CH_2)_b-NR_{14}-(CH_2)_c-$, $-(CH_2)_a-O-(CH_2)_b-NR_{14}-$, $-(C_2-C_{10}alkenylene)-O-(CH_2)_a-$, $-(C_2-C_{10}alkenylene)-O-$, $-(C_2-C_{10}alkynylene)-O-(CH_2)_a-$, $-(C_2-C_{10}alkynylene)-O-$, $-(C_2-C_{10}alkenylene)-O-(CH_2)_a-O-$, $-(C_2-C_{10}alkynylene)-O-(CH_2)_a-O-$, $-(C_2-C_{10}alkenylene)-NR_{14}-(CH_2)_a-$, $-(C_2-C_{10}alkenylene)-NR_{14}-$, $-(C_2-C_{10}alkynylene)-NR_{14}-(CH_2)_a-$, $-(C_2-C_{10}alkynylene)-NR_{14}-$, $-(C_2-C_{10}alkenylene)-O-(CH_2)_a-NR_{14}-$ or $-(C_2-C_{10}alkynylene)-O-(CH_2)_a-NR_{14}-$; and

X if A has the definition of A_0 , X is a single bond, $-O-$, $-S-$ or $-NR_{14}-$;

a, b and c independently of one another are a number

from 0 to 10; but with the proviso that they are at least 1 if the methylene group in question is between two oxygen atoms or between one oxygen atom and one nitrogen atom;

Y is hydrogen; unsubstituted C₁-C₂₀alkyl or C₁-C₂₀alkyl substituted by a group A-X-; unsubstituted C₂-C₁₈alkenyl or C₂-C₁₈alkenyl substituted by a group A-X-; unsubstituted C₂-C₁₈alkynyl or C₂-C₁₈alkynyl substituted by a group A-X-; or Y is phenyl, naphthyl, anthracyl or phenanthryl, these radicals being unsubstituted or substituted by one or more groups A-X-and/or C₁-C₁₂alkyl; or Y is C₁-C₄alkyl which is substituted by phenyl, naphthyl, anthracyl, phenanthryl and if desired additionally by a group A-X-; or Y is the salt radical of the respective glyoxalic acid;"

IV. The Examining Division decided that these claims did not meet the requirements of Article 123(2) EPC so that the objections under Article 82 as to unity of invention were maintained.

The Examining Division considered that

- the proviso "that at least one substituent A-X- is present in the radical R;" in the definition of the radical R, and
- the proviso "that at least one radical R₃, R₄, R₅, R₆ or R₇ is A-X-;" in the definition of the radicals R₃, R₄, R₅, R₆ or R₇

had no basis in the application as originally filed.

Therefore the objection as to unity was maintained. This objection was raised in the communication dated 23 August 2006. It was based on the fact that the

common structural element of the formulae (Ia) to (Ic) in claim 1 then on file, namely the one of the formula -C-C(O)-C(O)-O-, was also present in the compounds disclosed in Document (D1) which had the same properties as the ones presently claimed. The Examining Division considered that similar objections could be based on document (D3) or (D9).

V. The present claims are those filed with the letter dated 28 June 2007 setting out the grounds for appeal. These are

- claims 1 to 12 of the main request,
- claims 1 to 12 of the first auxiliary request, and
- claims 1 to 10 of the second auxiliary request.

The claims of the main request are identical to those on which the decision under appeal was based (see under point III above).

VI. The applicant argued that the provisos objected to formed part of claim 1 as originally filed. Furthermore, the claims met the requirement of unity of invention as the claimed compounds shared the arylglyoxalate structure having a substituent -AX at the aryl group as the new structural element.

VII. The applicant requested that the decision under appeal be set aside and that the present application be reconsidered on the basis of the claims of the main request or on the basis of the claims of the first or second auxiliary requests, all these requests being submitted with the letter dated 28 June 2007. The applicant did not request oral proceedings.

Reasons for the Decision

1. The appeal is admissible.

Main request

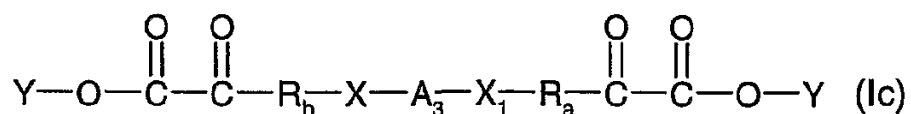
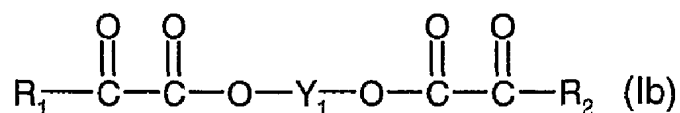
2. Article 123(2) EPC

- 2.1 The objections of the Examining Division concerned the following provisos:

- "that at least one substituent A-X- is present in the radical R;" in the definition of the radical R (PROVISO 1), and
- "that at least one radical R₃, R₄, R₅, R₆ or R₇ is A-X-;" in the definition of the radicals R₃, R₄, R₅, R₆ or R₇ (PROVISO 2).

PROVISO 1 appears in claims 1 and 2, PROVISO 2 in claims 1 to 3 of the main request.

- 2.1.1 Present claim 1 differs from claim 1 as originally filed *inter alia* in that the compounds are now limited to formula (Ia) by deleting the alternative formulae (Ib) and (Ic).



This limitation meets the requirements of Article 123(2) EPC as formula (Ia) is explicitly disclosed in claim 1 as originally filed.

2.1.2 PROVISO 1

This proviso in claim 1 as originally filed appears in the definition of the radicals R, R₁ and R₂ on page 72 and reads as follows:

"with the proviso that at least one substituent A-X-, A₁-X₁- or A₂-X₂- is present in the radical R or in at least one of the radicals R₁ or R₂;"

The deletion of formula (Ib) in present claim 1 required that the definitions of the radicals R₁ and R₂ defined only for this formula be deleted.

The definitions of the radicals A, A₁ and A₂ in claim 1 as originally filed are identical, as are the definitions of X, X₁ and X₂ (see the reference to "A, A₁ and A₂" in the left margins on pages 73 and 74 as originally filed; see the reference to "X, X₁ and X₂" in the left margins on pages 75 and 76 as originally filed).

The deletion of the definitions of the radicals R₁ and R₂ renders the separate definitions of A-X-, A₁-X₁- and A₂-X₂- superfluous. Consequently, said proviso in the application as filed could be properly adapted as follows:

"with the proviso that at least one substituent A-X- is present in the radical R;", i.e. to PROVISO 1.

Hence, the amended PROVISIO 1 in present claims 1 and 2 does not contravene the requirements of Article 123(2) EPC.

2.1.3 PROVISIO 2

This proviso in claim 1 as originally filed appears on page 72, line 1 and 2 and reads as follows:

"with the proviso that at least one radical R_3 , R_4 , R_5 , R_6 or R_7 is A-X-, A_1-X_1 - or A_2-X_2 -i".

For the reason set out under point 2.1.2 above, the separate definitions of A-X-, A_1-X_1 - and A_2-X_2 - became superfluous in present claim 1.

Consequently, said proviso in the application as filed could be properly adapted as follows:

"with the proviso that at least one radical R_3 , R_4 , R_5 , R_6 or R_7 is A-X-i", i.e. to PROVISIO 2.

Hence, also the amended PROVISIO 2 in present claims 1 to 3 does not contravene the requirements of Article 123(2) EPC.

2.2 In general, present claims 1 to 3, 4 and 5 to 12 are based on claims 1 to 3, 4 and 5, and 6-13 as originally filed.

2.3 Consequently, the amended claims of the main request meet the requirements of Article 123(2) EPC.

3. Unity of invention

3.1 Under point 2 of the reasons for the decision under appeal, the Examining Division remarked that due to the fact that the claims on file did not meet the requirements of Article 123(2) EPC, the objection as to lack of unity had not been overcome.

3.2 Only in the communication dated 23 August 2006 did the Examining Division give detailed reasons why it considered that the claims did not to meet the requirements of unity.

In this communication it argued that the compounds of formula (Ia) to (Ic) only shared a structural element of the formula -C-C(O)-C(O)O- which was already disclosed in documents (D1), (D3) and (D9).

This argument does not apply to the claims of the present main request where the compounds claimed are limited to those of formula (Ia).

4. In summary, the claims of the Main Request meet the requirements of Article 123(2) EPC and the arguments raised by the Examining Division do not support its conclusion that the subject-matter of these claims lacked unity of invention. Therefore, the grounds for refusing the present application as set out in the decision under appeal do not prejudice the grant of a patent.

Hence, the decision under appeal is set aside.

5. Remittal

Appeal proceedings "are not and were never intended to be the mere continuation of first instance proceedings. Rather, their function is to give a judicial decision on the correctness of a separate earlier decision given by the first instance department." (T 34/90, point 2 of the reasons as published in OJ EPO 8/1992, 454).

The Examining Division has not yet assessed whether or not the subject-matter of the claims of the main request meets the requirements of novelty and inventive step. Therefore, the Board exercises its discretion under Article 111(2) EPC and remits the case to the department of first instance for further examination on the basis of these claims.

6. In view of the outcome of this decision, the Board sees no reason to deal with the auxiliary requests.

7. The Board observes that semicolons are missing in claim 1 of the main request on page 72 after the expression "A-X-" in the third line below formula (II) and in the first line of the definition of R_3 to R_7 .

Order

For these reasons it is decided that:

1. The decision under appeal is set aside.

2. The case is remitted to the department of first instance for further examination on the basis of claims 1 to 12 of the main request filed with the letter dated 28 June 2007.

The Registrar:

The Chairman:

C. Eickhoff

P. Ranguis