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(71) Applicant (for all designated States except US):
SOLVAY SA [BE/BE]; Rue du Prince Albert, 33,
B-1050 Bruxelles (BE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **CANDY, Thomas E.** [GB/GB]; 1 Pensarns Gardens, Callands, Warrington, Cheshire WA5 9RF (GB). **MALONE, Joseph W.G.** [GB/GB]; 26 Thingwall Lane, Liverpool, Merseyside L14 7NX (GB).

(74) Agents: **VANDE GUCHT, Anne** et al; Rue de Ransbeek, 310, B-1120 Bruxelles (BE).

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Published:

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(54) Title: PEROXYGEN COMPOSITION

(57) Abstract: A composition comprising at least one peracid comprising at least one monopercarboxylic acid and at least one ester percarboxylic acid and a quaternary ammonium salt of the formula : $[R^1R^2R^3R^4N^{m+}]_n X_x^{p-} Y_y^{q-}$ wherein : R^1, R^2, R^3 and R^4 are independently, optionally substituted, alkyl, aryl or alkoxy groups; $m * n = (x * p) + (y * q)$; m and n are independently equal to 1 or 2; x and y are integers or non integers and are independently from 0 to 2; $x+y$ is at least 1; at least one of X^{p-} and Y^{q-} is R^5-COO^- , and R^5 contains from 0 to 5 carbon atoms.



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INTERNATIONAL SEARCH REPORT

International application No
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A. CLASSIFICATION OF SUBJECT MATTER INV. CIIDI/62 CIIDI/835 C11D3/00 C11D3/39 ADD.		
According to International Patent Classification (IPC) or to both national classification and IPC		
B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) C11D		
Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched		
Electronic data base consulted during the international search (name of data base and, where practical, search terms used) EPO-Internal		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94/00548 AI (LAPORTE E S D LTD [GB]) 6 January 1994 (1994-01-06) page 1, line 22 - page 4, line 23; claims; examples -----	1-12 , 15
X	US 2002/128164 AI (HARA YASUSHI [JP] ET AL) 12 September 2002 (2002-09-12) paragraphs [0018] - [0021] , [0025] ; claims; examples -----	1-12
A	EP 1 192 860 AI (AI R LIQUIDE SANTE INT [FR]) 3 April 2002 (2002-04-03) paragraphs [0015] - [0019] ; tabl e 2 -----	15
A	EP 1 192 860 AI (AI R LIQUIDE SANTE INT [FR]) 3 April 2002 (2002-04-03) paragraphs [0015] - [0019] ; tabl e 2 -----	1-12 , 15
A	US 2003/087786 AI (HEI ROBERT DALE [US] ET AL) 8 May 2003 (2003-05-08) examples ----- -/- .	1-12 , 15
☒ Further documents are listed in the continuation of Box C. ☒ See patent family annex.		
* Special categories of cited documents : "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family		
Date of the actual completion of the international search 27 October 2011		Date of mailing of the international search report 30/01/2012
Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Fax: (+31-70) 340-3016		Authorized officer Pentek, Eric

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International application No
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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2003/021853 A1 (WEI GUANG-JONG JASON [US] ET AL) 30 January 2003 (2003-01-30) examples -----	1-12, 15

INTERNATIONAL SEARCH REPORT

International application No.
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Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:

2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:

3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.

2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.

3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos. :

4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos. :

1-12 (completely) ; 15 (partially)

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-12 (completely) ; 15 (partially)

Composition comprising at least one peracid comprising at least one monopercarboxylic acid and at least one ester percarboxylic acid, and a quaternary ammonium salt as specified in independent claims 1 and 12; use of said composition as a biocide.

2. claims: 13, (completely) ; 15 (partially)

Composition comprising at least one peracid comprising at least one monopercarboxylic acid and at least one ester percarboxylic acid, and an alcohol ethoxylate as specified in independent claim 13; use of said composition as a biocide.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2011/061601

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
wo 9400548	AI	06-01-1994	NONE

US 2002128164	AI	12-09-2002	EP 1211563 AI 05-06-2002
			KR 20020042490 A 05-06-2002
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			wo 03005818 AI 23-01-2003
