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10 April 2008

(54) Title: UV ABSORBING COMPOSITION

(57) Abstract: A UV absorbing polymeric composition has an  $E_{308}/E_{524}$  and/or  $E_{360}/E_{524}$  ratio of greater than 4, and contains an organic resin and zinc oxide particles. The composition is particularly suitable for use in producing an end-use product, preferably in the form of a polymeric film, exhibiting UV absorbing properties and improved transparency. In one embodiment, the composition may be produced from a masterbatch composition containing an organic resin, an organic dispersing medium and zinc oxide particles. The masterbatch is preferably prepared by mixing a pre-dispersion of the zinc oxide particles in the organic dispersing medium, with the organic resin.



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# INTERNATIONAL SEARCH REPORT

International application No  
PCT/GB2007/002114

**A. CLASSIFICATION OF SUBJECT MATTER**  
 INV. C08K3/22 C08K5/00 C08J3/22

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)  
 C08K C08J

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, WPI Data

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 2005/055968 A (ICI PLC [GB]; ICI AMERICA INC [US]; KESSELL LORNA MARGARET [GB]; LYTH) 23 June 2005 (2005-06-23)	1-5, 8
Y	page 9 - page 10; examples 1,2	6, 7, 17
Y	WO 2004/108599 A (ICI PLC [GB]; LYTH PHILIP LAURENCE [GB]) 16 December 2004 (2004-12-16)	6, 7, 17
Y	DATABASE WPI Week 199039 Derwent Publications Ltd., London, GB; AN 1990-294106 XP002448205 & JP 02 206674 A (SUMITOMO CEMENT CO) 16 August 1990 (1990-08-16) abstract	6, 7, 17
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Further documents are listed in the continuation of Box C.       See patent family annex.

\* Special categories of cited documents :

<p>"A" document defining the general state of the art which is not considered to be of particular relevance</p> <p>"E" earlier document but published on or after the international filing date</p> <p>"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)</p> <p>"O" document referring to an oral disclosure, use, exhibition or other means</p> <p>"P" document published prior to the international filing date but later than the priority date claimed</p>	<p>"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</p> <p>"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</p> <p>"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.</p> <p>"&amp;" document member of the same patent family</p>
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Date of the actual completion of the international search	Date of mailing of the international search report
27 August 2007	14/02/2008

Name and mailing address of the ISA/ European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016	Authorized officer  Siemens, Thomas
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## INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2007/002114

C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	WO 2005/061602 A (MICRONISERS PTY LTD [AU]; BELTRAME RENO EMILIO [AU]; BOS MICHAEL ARY []) 7 July 2005 (2005-07-07) claims 1-18 -----	1-8, 17
X	DATABASE WPI Week 200539 Derwent Publications Ltd., London, GB; AN 2005-377148 XP002448206 & JP 2005 132866 A (NARUPURA KK) 26 May 2005 (2005-05-26) abstract -----	18

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/GB2007/002114

## 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 allsearchable 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.:

1-8, 17, 18

### 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.

INTERNATIONAL SEARCH REPORT

International Application No. PCT/GB2007 /002114

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

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

1. claims: 1-8,17,18

UV absorbing polymeric composition defined by a particular extinction ratio and comprising an organic resin and ZnO particles, as well as method of its production and its use  
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2. claims: 9-16

masterbatch comprising an organic resin an organic dispersing agent and ZnO particles, as well as method of its production  
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## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2007/002114

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
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		KR 20060113725 A	02-11-2006
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