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08/460,495 2 June 1995 (02.06.95) US			
(60) Parent Application or Grant			
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US 08/300,721 (CIP)			
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(71) Applicant (for all designated States except US): QUANTUM MATERIALS, INC. [US/US]; 9938 Via Pasar, San Diego, CA 92126 (US).		Published	
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(72) Inventors; and		(88) Date of publication of the international search report:	
(75) Inventors/Applicants (for US only): DERSHEM, Stephen, M. [US/US]; 9097 Truman Street, San Diego, CA 92129 (US). PATTERSON, Dennis, B. [US/US]; 8132 Camino del Sol, La Jolla, CA 92037 (US). OSUNA, Jose, A., Jr. [US/US]; 6055 Estelle Street #1, San Diego, CA 92115 (US).		15 August 1996 (15.08.96)	
(54) Title: THERMOSETTING RESIN COMPOSITIONS CONTAINING MALEIMIDE AND/OR VINYL COMPOUNDS			
(57) Abstract			
In accordance with the present invention, there are provided novel thermosetting resin compositions which do not require solvent to provide a system having suitable viscosity for convenient handling. Invention compositions have the benefit of undergoing rapid cure. The resulting thermosets are stable to elevated temperatures, are highly flexible, have low moisture uptake and are consequently useful in a variety of applications, e.g., in adhesive applications since they display good adhesion to both the substrate and the device attached thereto.			

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INTERNATIONAL SEARCH REPORT

national Application No

PCT/US 95/11116

A. CLASSIFICATION OF SUBJECT MATTER

IPC 6 C07D207/452 C07D207/448 C08G73/10 C08G73/12

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)

IPC 6 C07D C08G

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)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	POLYMER PREPRINTS, vol.29, no.1, 8 pages 337 - 338 K. B. WAGENER ET. AL. 'Bismaleimide/Vinylether Matrix Copolymers' see the whole document ---	1-9,25, 28,31, 34,37, 40,43,46
Y	EP,A,0 357 110 (AKZO) 7 March 1990 see page 3, line 46 - page 4, line 7 see page 6, line 5 - line 20 see figures 2,4-9 --- -/--	1-9,25, 28,31, 34,37, 40,43,46

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

* Special categories of cited documents :

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- "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

7 March 1996

Date of mailing of the international search report

28.06.96

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INTERNATIONAL SEARCH REPORT

International Application No
PCT/US 95/11116

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	EP,A,0 318 162 (TEXACO) 31 May 1989 see page 7, line 25 - page 8 ---	1-9,25, 28,31, 34,37, 40,43,46
X	DE,A,28 53 992 (BASF) 3 July 1980 see example c, page 12 for C12-branched alkyl ---	1
X	J. ORG. CHEM., vol.26, 24 January 1961 pages 10 - 15 C. K. SAUERS ET. AL. 'The Synthesis of N-Substituted Isomaleimides' see the whole document ---	46
X	DEHYDRATION OJ. ORG. CHEM., vol.29, no.3, 4 pages 745 - 747 W. R. RODERICK 'Dehydration of N-(p-Chlorophenyl)phthalamic Acid by Acetic Acid and Trifluoroacetic Anhydrides' see the whole document ---	46
X	J. ORG. CHEM., vol.34, no.8, 8 August 1969 pages 2275 - 2279 C. K. SAUERS 'The Dehydration of N-Arylmaleamic Acids with Acetic Anhydride' see the whole document -----	46

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US95/11116

Box I Observations where certain claims were found unsearchable (Continuation of item 1 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 II Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

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

1. Claims 1-9, 25, 28, 31, 34, 37, 40, 43, 46
2. Claims 10-19, 26, 29, 32, 35, 38, 41, 44
3. Claims 20-24, 27, 30, 33, 36, 39, 42, 45

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 fee, this Authority did not invite payment of any additional fee.
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.:

1-9, 25, 28, 31, 34, 37, 40, 43, 46

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.
- ☐ No protest accompanied the payment of additional search fees.

INTERNATIONAL SEARCH REPORT

Information on patent family members

International Application No

PCT/US 95/11116

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP-A-0357110	07-03-90	JP-A- 2088613	28-03-90
EP-A-0318162	31-05-89	US-A- 4876358	24-10-89
		US-A- 4826995	02-05-89
		JP-A- 1167316	03-07-89
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		US-A- 4311636	19-01-82