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(54) Title: ADHESIVE COMPONENTS AND PROCESS FOR MANUFACTURE

(57) Abstract: Resins and oligomer materials and/or combinations thereof grafted with an unsaturated acid or anhydride, such as maleic anhydride, are disclosed herein. The grafted materials are useful in adhesive formulations, particularly in hot melt adhesive applications.

INTERNATIONAL SEARCH REPORT

International Application No.

PCT/EP 02/10796

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 C08L51/00 C09J153/00 C08F289/00

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 7 C08L C09J C08F

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.
A	US 4 670 349 A (NAKAGAWA MIKIO ET AL) 2 June 1987 (1987-06-02) the whole document ---	
A	US 3 933 720 A (IWAI SAKUYA ET AL) 20 January 1976 (1976-01-20) column 2, line 1-36; claims 1-3 ---	1
A	DATABASE WPI Section Ch, Week 197736 Derwent Publications Ltd., London, GB; Class A17, AN 1977-64088Y XP002238669 & JP 52 090535 A (CHISSO CORP), 29 July 1977 (1977-07-29) abstract --- -/--	



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Patent family members are listed in annex.

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INTERNATIONAL SEARCH REPORT

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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 3 954 912 A (WERNER GERHARD ET AL) 4 May 1976 (1976-05-04) column 4, line 35-55 ---	1
A	US 4 719 260 A (STUART JR RICHARD K ET AL) 12 January 1988 (1988-01-12) cited in the application claims -----	1

INTERNATIONAL SEARCH REPORT

information on patent family members

International Application No

PCT/EP 02/10796

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4670349	A	02-06-1987	JP 1855489 C	07-07-1994
			JP 5072931 B	13-10-1993
			JP 61162539 A	23-07-1986
			JP 1517470 C	07-09-1989
			JP 61145240 A	02-07-1986
			JP 63067813 B	27-12-1988
			EP 0188901 A2	30-07-1986
			DE 3583229 D1	18-07-1991
US 3933720	A	20-01-1976	JP 1094726 C	27-04-1982
			JP 49128035 A	07-12-1974
			JP 56039356 B	12-09-1981
			DE 2416443 A1	24-10-1974
JP 52090535	A	29-07-1977	JP 1291703 C	29-11-1985
			JP 60016447 B	25-04-1985
US 3954912	A	04-05-1976	DE 2347813 A1	10-04-1975
			BE 820127 A1	20-03-1975
			FR 2244780 A1	18-04-1975
			GB 1472957 A	11-05-1977
			IT 1022177 B	20-03-1978
			JP 1135442 C	14-02-1983
			JP 50059490 A	22-05-1975
			JP 52012232 B	05-04-1977
			NL 7412387 A , B,	25-03-1975
US 4719260	A	12-01-1988	AU 605563 B2	17-01-1991
			AU 1342588 A	24-08-1988
			CA 1311867 A1	22-12-1992
			DE 3861590 D1	21-02-1991
			EP 0353224 A1	07-02-1990
			JP 2502194 T	19-07-1990
			JP 2609315 B2	14-05-1997
			WO 8805795 A1	11-08-1988