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(54) Title: WATER-DISPERSIBLE POLYMERS, A METHOD OF MAKING SAME AND ITEMS USING SAME

(57) Abstract: The present invention is directed to water-dispersible polymers. The present invention is also directed to a method of making water-dispersible polymers and their applicability as binder compositions. The present invention is further directed to fiber-containing fabrics and webs comprising water-dispersible binder compositions and their applicability in water-dispersible personal care products.

INTERNATIONAL SEARCH REPORT

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PCT/US 02/02245

<p><b>A. CLASSIFICATION OF SUBJECT MATTER</b>                  IPC 7 D04H1/64 C11D17/04 C08L33/02</p>		
<p>According to International Patent Classification (IPC) or to both national classification and IPC</p>		
<p><b>B. FIELDS SEARCHED</b></p>		
<p>Minimum documentation searched (classification system followed by classification symbols)                  IPC 7 C08L D04H C11D</p>		
<p>Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched</p>		
<p>Electronic data base consulted during the international search (name of data base and, where practical, search terms used)                  EPO-Internal, WPI Data</p>		
<p><b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b></p>		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 3 951 900 A (BATH WESLEY W) 20 April 1976 (1976-04-20) claim 1; examples	1, 2, 6, 10
X	US 4 543 128 A (TROESCH JUERG ET AL) 24 September 1985 (1985-09-24) example 1	1, 2, 6
X	EP 0 315 466 A (DOW CHEMICAL CO) 10 May 1989 (1989-05-10) example 1	1, 2, 6, 10
X	US 4 251 416 A (PALMER JAY W) 17 February 1981 (1981-02-17) claims 1,5	1, 2, 6, 10
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<p><input checked="" type="checkbox"/> Further documents are listed in the continuation of box C.      <input checked="" type="checkbox"/> Patent family members are listed in annex.</p>		
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<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>Date of the actual completion of the international search</p> <p style="text-align: center;">25 September 2002</p>		<p>Date of mailing of the international search report</p> <p style="text-align: center;">09/10/2002</p>
<p>Name and mailing address of the ISA                  European Patent Office, P.B. 5618 Patentlaan 2                  NL - 2280 HV Rijswijk                  Tel. (+31-70) 340-2040, Tx. 31 651 epo nl,                  Fax: (+31-70) 340-3016</p>		<p>Authorized officer</p> <p style="text-align: center;">Meulemans, R</p>

## INTERNATIONAL SEARCH REPORT

Intern 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.
X	DATABASE WPI Section Ch, Week 198903 Derwent Publications Ltd., London, GB; Class A96, AN 1989-019345 XP002214615 & JP 63 294851 A (TAKASAGO PERFUMERY CO LTD), 1 December 1988 (1988-12-01) abstract -----	1,2,6,7
X	EP 0 027 997 A (PLUSS STAÜFFER AG) 6 May 1981 (1981-05-06) page 6, line 25-35 -----	1,2,5
X	US 3 407 164 A (SCHMIDT GEORGE F) 22 October 1968 (1968-10-22) claims 1-5 -----	6,10-13

## INTERNATIONAL SEARCH REPORT

Information on patent family members

Internat	Application No
PCT/US 02/02245	

Patent document cited in search report		Publication date		Patent family member(s)	Publication date
US 3951900	A	20-04-1976	CA	1042125 A1	07-11-1978
US 4543128	A	24-09-1985	AT	384051 B	25-09-1987
			AT	113783 A	15-02-1987
			BE	896373 A1	05-10-1983
			CH	662380 A5	30-09-1987
			DE	3311091 A1	06-10-1983
			FR	2524514 A1	07-10-1983
			GB	2117783 A ,B	19-10-1983
			IT	1197619 B	06-12-1988
			JP	1721701 C	24-12-1992
			JP	3075680 B	02-12-1991
			JP	58186695 A	31-10-1983
			NL	8301156 A	01-11-1983
			SE	461741 B	19-03-1990
			SE	8301790 A	06-10-1983
			ZA	8302406 A	28-11-1984
			DE	3329817 A1	01-03-1984
			FR	2532340 A1	02-03-1984
			GB	2126258 A ,B	21-03-1984
			IT	1170198 B	03-06-1987
EP 0315466	A	10-05-1989	AT	83951 T	15-01-1993
			AU	2477288 A	11-05-1989
			DE	3877140 D1	11-02-1993
			DE	3877140 T2	03-06-1993
			EP	0315466 A2	10-05-1989
			ES	2037238 T3	16-06-1993
			GB	2212076 A ,B	19-07-1989
			GR	3006977 T3	30-06-1993
			JP	1258943 A	16-10-1989
			US	4978402 A	18-12-1990
US 4251416	A	17-02-1981	CA	1147879 A1	07-06-1983
JP 63294851	A	01-12-1988	JP	2540861 B2	09-10-1996
EP 0027997	A	06-05-1981	DE	2943652 A1	30-04-1981
			AT	36001 T	15-08-1988
			CA	1150908 A1	02-08-1983
			DE	3072107 D1	01-09-1988
			EP	0027997 A1	06-05-1981
			FI	803275 A	30-04-1981
			JP	56074163 A	19-06-1981
			JP	63060074 B	22-11-1988
			NO	803078 A ,B,	30-04-1981
US 3407164	A	22-10-1968	BE	686032 A	27-02-1967
			DK	120648 B	28-06-1971
			FI	47989 B	31-01-1974
			FR	1502770 A	24-11-1967
			GB	1142320 A	05-02-1969
			NL	6612064 A	27-02-1967
			NO	120652 B	16-11-1970