

(19)



Europäisches Patentamt
European Patent Office
Office européen des brevets



(11)

EP 0 851 021 A3

(12)

EUROPEAN PATENT APPLICATION

(88) Date of publication A3:
22.12.1999 Bulletin 1999/51

(51) Int. Cl.⁶: **C11D 1/66**, C11D 3/37,
C11D 3/36

(43) Date of publication A2:
01.07.1998 Bulletin 1998/27

(21) Application number: **97121798.9**

(22) Date of filing: **11.12.1997**

(84) Designated Contracting States:
**AT BE CH DE DK ES FI FR GB GR IE IT LI LU MC
NL PT SE**
Designated Extension States:
AL LT LV MK RO SI

(30) Priority: **28.12.1996 US 781971**
28.12.1996 US 781967
28.12.1996 US 781969

(71) Applicant: **BASF CORPORATION**
Mount Olive, New Jersey 07828-1234 (US)

(72) Inventors:
• **Welch, Michael C.**
Woodhaven, MF 48183 (US)
• **Zack, Kenneth L.**
Wyandotte, MI 48192 (US)
• **Roberts, Glenis**
Wyandotte, MI 48192 (US)

(74) Representative:
Abel, Manfred et al
BASF Aktiengesellschaft
Patentabteilung ZDX - C6
67056 Ludwigshafen (DE)

(54) **Improved rinse aid compositions**

(57) The present invention relates to rinse aid compositions comprising low foaming non-inonic surfactants, polycarboxylate polymers and, if wanted, hydrotropes and certain phosphate esters or certain alkyl iminodialkanoates.

EP 0 851 021 A3



European Patent Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 12 1798

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
D,X	US 4 678 596 A (DUPRE JEAN ET AL) 7 July 1987 (1987-07-07) * column 3, line 43 - column 4, line 9 * * column 4, line 27-33 * * examples 1,3 * * claim 1 *	1,6,8	C11D1/66 C11D3/37 C11D3/36
D,X	EP 0 308 221 A (ROHM & HAAS) 22 March 1989 (1989-03-22) * page 3, line 27 - page 4, line 39 * * example 1 * * claims 1-4,6-8,10-13 *	1,6	
D,X	US 4 280 919 A (STOECKIGT DIETER ET AL) 28 July 1981 (1981-07-28) * column 2, line 20-30 * * column 3, line 18-28 * * examples * * claim 1 *	1,8	
A	US 3 629 127 A (PALMER FRANK W ET AL) 21 December 1971 (1971-12-21) * column 1, line 56-66 * * column 2, line 16-57 * * example IV * * claims 1,2,6 *	1-3,7,8	TECHNICAL FIELDS SEARCHED (Int.Cl.6) C11D
A	DE 23 49 739 A (UNILEVER NV) 11 April 1974 (1974-04-11) * page 5, paragraph 4 * * page 6, paragraph 3 - page 7, paragraph 2 * * example 1 * * claims 3,5 *	1,2,8	
-/--			
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 2 November 1999	Examiner Bertran Nadal, J
CATEGORY OF CITED DOCUMENTS		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document	
X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document			

EPO FORM 1503 03.82 (P04C01)



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number
EP 97 12 1798

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (Int.Cl.6)
A	DE 31 33 529 A (BASF AG) 1 April 1982 (1982-04-01) * page 5, paragraph 6 * * page 6, paragraph 4 * * page 7, paragraphs 1-3,5 * * page 8, paragraph 5 * * claims 1,2 * -----	1,5,7	
			TECHNICAL FIELDS SEARCHED (Int.Cl.6)
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 2 November 1999	Examiner Bertran Nadal, J
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document		T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons ----- & : member of the same patent family, corresponding document	

EPO FORM 1503 03.82 (P04C01)

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 97 12 1798

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

02-11-1999

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 4678596	A	07-07-1987	AU 590707 B	09-11-1989
			AU 7242487 A	05-11-1987
			CA 1287783 A	20-08-1991
			DE 3773739 A	21-11-1991
			EP 0245987 A	19-11-1987
			JP 7039595 B	01-05-1995
			JP 62263298 A	16-11-1987
			KR 9504930 B	16-05-1995
			NZ 220152 A	27-10-1989
			SG 3192 G	16-04-1992
			EP 0308221	A
CA 1314187 A	09-03-1993			
DE 3870560 A	04-06-1992			
JP 1158098 A	21-06-1989			
US 4280919	A	28-07-1981	DE 2918826 A	27-11-1980
			CA 1141251 A	15-02-1983
			EP 0019173 A	26-11-1980
			JP 1712205 C	11-11-1992
			JP 2033760 B	30-07-1990
			JP 55152798 A	28-11-1980
US 3629127	A	21-12-1971	NONE	
DE 2349739	A	11-04-1974	GB 1441588 A	07-07-1976
			GB 1455823 A	17-11-1976
			AT 330931 B	26-07-1976
			AU 474195 B	15-07-1976
			AU 6088473 A	10-04-1975
			AU 6264773 A	17-07-1975
			BE 807685 A	22-05-1974
			CA 992424 A	06-07-1976
			CA 979316 A	09-12-1975
			CH 590921 A	31-08-1977
			DE 2358116 A	30-05-1974
			FR 2208973 A	28-06-1974
			FR 2207979 A	21-06-1976
			IT 1004594 B	20-07-1976
			NL 7313623 A	08-04-1974
			NL 7315974 A, B,	27-05-1974
			US 3941713 A	02-03-1976
			US 3956199 A	11-05-1976
			AT 965173 A	15-10-1976
			IT 999797 B	10-03-1976
JP 49082710 A	09-08-1974			

EPO FORM P0469

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

**ANNEX TO THE EUROPEAN SEARCH REPORT
ON EUROPEAN PATENT APPLICATION NO.**

EP 97 12 1798

This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

02-11-1999

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
DE 2349739 A		SE 414187 B ZA 7308823 A	14-07-1980 25-06-1975
DE 3133529 A	01-04-1982	CA 1158522 A	13-12-1983

EPO FORM P0469

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82