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(54) Title: HYDROPHOBIC SILICAS AS SQUEAKINESS ENHANCERS IN CLEANSING COMPOSITIONS

(57) Abstract: A cleanser composition is provided which includes: (i) from 0.01 to 5% by weight of a hydrophobic or cationic silica having a number average particle size ranging from 1 to 30,000 nm; (ii) from 0.1 to 30% by weight of a non-soap synthetic surfactant; and wherein the composition exhibits a UMT Test number of rubs to stick-slip from 1 to 12 under a 20 g load, and a foam volume ranging from 200 to 800 ml using a SITA Foam Tester.



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INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER INV. A61K8/25 A61K8/44 A61K8/46 A61K8/02 A61Q19/10 ADD.																	
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B. FIELDS SEARCHED Minimum documentation searched (classification system followed by classification symbols) A61K A61Q 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 practicable, search terms used) EPO-Internal, WPI Data																	
C. DOCUMENTS CONSIDERED TO BE RELEVANT <table border="1"> <thead> <tr> <th>Category*</th> <th>Citation of document, with indication, where appropriate, of the relevant passages</th> <th>Relevant to claim No.</th> </tr> </thead> <tbody> <tr> <td>X</td> <td>US 2002/039976 A1 (SEBILLOTTE-ARNAUD LAURENCE [FR] ET AL) 4 April 2002 (2002-04-04) paragraph [0080] - paragraph [0082]; examples 1,2 claims 1-9</td> <td>1-3,5,6</td> </tr> <tr> <td>X</td> <td>DE 10 2005 007293 A1 (BEIERSDORF AG [DE]) 24 August 2006 (2006-08-24) example 3</td> <td>1-3,5,6</td> </tr> <tr> <td>X</td> <td>US 2003/134761 A1 (SEBILLOTTE-ARNAUD LAURENCE [FR] ET AL) 17 July 2003 (2003-07-17) examples 6,10</td> <td>1-3,5,6</td> </tr> <tr> <td></td> <td>- / - -</td> <td></td> </tr> </tbody> </table>			Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.	X	US 2002/039976 A1 (SEBILLOTTE-ARNAUD LAURENCE [FR] ET AL) 4 April 2002 (2002-04-04) paragraph [0080] - paragraph [0082]; examples 1,2 claims 1-9	1-3,5,6	X	DE 10 2005 007293 A1 (BEIERSDORF AG [DE]) 24 August 2006 (2006-08-24) example 3	1-3,5,6	X	US 2003/134761 A1 (SEBILLOTTE-ARNAUD LAURENCE [FR] ET AL) 17 July 2003 (2003-07-17) examples 6,10	1-3,5,6		- / - -	
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International 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	US 2007/066501 A1 (YANG LIN [US] ET AL)	7-9
A	22 March 2007 (2007-03-22) claims 1-10 paragraph [0003] paragraph [0069] - paragraph [0079] -----	1-6,10

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/EP2013/052468

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 2002039976	A1	04-04-2002	AT 225162 T 15-10-2002
		CN 1337224 A 27-02-2002	
		DE 60100032 D1 07-11-2002	
		DE 60100032 T2 27-02-2003	
		EP 1172095 A1 16-01-2002	
		ES 2184725 T3 16-04-2003	
		JP 2002087949 A 27-03-2002	
		KR 20020006608 A 23-01-2002	
		US 2002039976 A1 04-04-2002	

DE 102005007293	A1	24-08-2006	NONE

US 2003134761	A1	17-07-2003	AT 382324 T 15-01-2008
		CN 1398581 A 26-02-2003	
		DE 60224330 T2 02-01-2009	
		EP 1277463 A1 22-01-2003	
		FR 2827515 A1 24-01-2003	
		JP 2003113073 A 18-04-2003	
		KR 20030009213 A 29-01-2003	
		US 2003134761 A1 17-07-2003	

US 2007066501	A1	22-03-2007	NONE
