



EUROPEAN PATENT APPLICATION

Application number : **91300422.2**

Int. Cl.⁵ : **C11D 11/00, C11D 17/06,
C11D 11/04, C11D 3/00**

Date of filing : **18.01.91**

Priority : **19.01.90 GB 9001285**

Date of publication of application :
24.07.91 Bulletin 91/30

Designated Contracting States :
CH DE ES FR GB IT LI NL SE

Date of deferred publication of search report :
19.02.92 Bulletin 92/08

Applicant : **UNILEVER PLC**
Unilever House Blackfriars
London EC4P 4BQ (GB)
GB

Applicant : **UNILEVER NV**
Burgemeester s'Jacobplein 1 P.O. Box 760
NL-3000 DK Rotterdam (NL)
CH DE ES FR IT LI NL SE

Inventor : **Evans, David George**
14 Picton Close
Oxton, Birkenhead L43 2NS (GB)
Inventor : **McLeod, Gordon George**
68 Shaftesbury Avenue
Vicars Cross, Chester CH3 5LH (GB)
Inventor : **Peter, Donald**
74 Eton Drive
Thornton Hough, Wirral L63 1JS (GB)
Inventor : **Yuregir, Korkut Remzi**
43 Meadowcroft, Heswall
Wirral, Merseyside L60 1UU (GB)

Representative : **Ford, Michael Frederick et al**
MEWBURN ELLIS 2 Cursitor Street
London EC4A 1BQ (GB)

Detergent compositions and process for preparing them.

A batch process for the preparation of detergent powder of high bulk density comprises neutralising a detergent acid (anionic surfactant precursor), eg linear alkylbenzene sulphonic acid, with a particulate solid water-soluble alkaline inorganic material, for example, sodium carbonate (optionally plus other alkaline materials and/or detergency builders, for example, alkali metal aluminosilicate), in a high-speed mixer/granulator, eg Fukae mixer, and granulating the product in the mixer. The reaction mixture remains particulate throughout the process, without the need to keep the temperature during the neutralisation step to 55°C or below, and a high-quality high-bulk-density particulate product is obtained.



European Patent
Office

EUROPEAN SEARCH REPORT

Application Number

EP 91 30 0422

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.5)
D, P, X	EP-A-0 352 135 (UNILEVER) * claims 1,2,4-6,12,20,21; examples * ---	1-8, 10-17	C11D11/00 C11D17/06 C11D11/04 C11D3/00
Y	EP-A-0 340 013 (UNILEVER) * claims 1,7,8; examples 10-13 * ---	1	
Y	GB-A-2 209 172 (UNILEVER) * claims 1-7; examples* ---	1	
A	FR-A-2 124 284 (COLGATE-PALMOLIVE) * claims 1,3,7,10 * ---	1	
D	& GB-A-1 369 269 ---		
P, A	WO-A-9 001 536 (ZOCHONIS) * claims 1,4,7,10,15,19-21; examples * -----	1,9	
			TECHNICAL FIELDS SEARCHED (Int. Cl.5)
			C11D
The present search report has been drawn up for all claims			
Place of search THE HAGUE		Date of completion of the search 12 DECEMBER 1991	Examiner GRITTERN A. G.
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 I : 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 (P0401)