

Title (en)

Free-flowing powder fabric softening composition and process for its manufacture.

Title (de)

Freifliessendes wäscheweichmachendes Pulver und Verfahren zu seiner Herstellung.

Title (fr)

Composition adoucissante pour le linge sous forme de poudre s'écoulant librement et procédé pour sa fabrication.

Publication

EP 0547722 A1 19930623 (EN)

Application

EP 92203997 A 19921217

Priority

- US 80966091 A 19911218
- US 83862692 A 19920219

Abstract (en)

A process of producing a free-flowing spray dried particulate fabric softening composition is provided and comprises the steps of: (a) forming a crutcher slurry containing: (i) from about 5 to 40%, by weight, of a cationic quaternary ammonium softening compound; (ii) from about 0.5 to 15%, by weight, of an anionic and/or a nonionic detergent compound; (iii) from about 45 to 85%, by weight, of urea, the above percentages being based on the solids content of the slurry, in the absence of water; (b) mixing the crutcher slurry formed in (a) to provide a uniform mixture or dispersion having an average particle size of less than about 1.0 micron and thereafter; (c) spray drying the aforesaid mixture or dispersion in a spray tower wherein the water content of the mixture is substantially evaporated to provide free-flowing particles of a softening composition capable of being readily dispersed in water.

IPC 1-7

C11D 3/00; **C11D 3/32**; **C11D 11/02**

IPC 8 full level

D06M 13/46 (2006.01); **C11D 1/62** (2006.01); **C11D 1/65** (2006.01); **C11D 1/835** (2006.01); **C11D 1/86** (2006.01); **C11D 1/94** (2006.01); **C11D 3/00** (2006.01); **C11D 3/32** (2006.01); **C11D 11/02** (2006.01); **C11D 1/22** (2006.01); **C11D 1/52** (2006.01); **C11D 1/72** (2006.01)

CPC (source: EP US)

C11D 1/65 (2013.01 - EP); **C11D 1/652** (2013.01 - EP); **C11D 1/835** (2013.01 - EP); **C11D 1/86** (2013.01 - EP); **C11D 3/001** (2013.01 - EP US); **C11D 3/323** (2013.01 - EP); **C11D 11/02** (2013.01 - EP); **C11D 1/22** (2013.01 - EP); **C11D 1/523** (2013.01 - EP); **C11D 1/62** (2013.01 - EP); **C11D 1/72** (2013.01 - EP)

Citation (search report)

- [Y] DE 2454465 A1 19760520 - HOECHST AG
- [Y] EP 0018630 A1 19801112 - HENKEL KGAA [DE]
- [A] PATENT ABSTRACTS OF JAPAN vol. 4, no. 22 (C-74)(1980) & JP-A-54 160 404 (LION YUSHI K.K) 19 December 1979
- [A] SEIFEN-ÖLE-FETTE-WACHSE vol. 15, no. 111, 1985, pages 445 - 447 'spray-drying'

Cited by

EP0714976A1; US6502325B1; EP0838518A3; US6914042B2; WO03083026A1; WO9504810A1; WO9406899A1; EP0881279B2

Designated contracting state (EPC)

AT BE CH DE DK ES FR GB IE IT LI LU NL SE

DOCDB simple family (publication)

EP 0547722 A1 19930623; AU 3017792 A 19930701; AU 662780 B2 19950914; BG 61343 B1 19970630; BG 97197 A 19931224; BR 9205056 A 19930622; CA 2085618 A1 19930619; CN 1075759 A 19930901; CZ 367592 A3 19930915; FI 925743 A0 19921217; FI 925743 A 19930619; GR 920100560 A 19930831; HU 9203998 D0 19930329; HU T63473 A 19930830; MX 9207416 A 19930601; NO 924891 D0 19921217; NO 924891 L 19930621; NZ 245495 A 19940927; PL 174970 B1 19981030; PL 297067 A1 19930920; PT 101133 A 19940331; SG 55087 A1 19981221; SK 367592 A3 19950208; TR 26894 A 19940822

DOCDB simple family (application)

EP 92203997 A 19921217; AU 3017792 A 19921215; BG 9719792 A 19921218; BR 9205056 A 19921217; CA 2085618 A 19921217; CN 92114693 A 19921218; CS 367592 A 19921215; FI 925743 A 19921217; GR 920100560 A 19921218; HU 399892 A 19921217; HU 9203998 A 19921217; MX 9207416 A 19921218; NO 924891 A 19921217; NZ 24549592 A 19921216; PL 29706792 A 19921218; PT 10113392 A 19921216; SG 1996005421 A 19921217; SK 367592 A 19921215; TR 120692 A 19921217