

Title (en)

PROCESS FOR MAKING A DETERGENT COMPOSITION BY NON-TOWER PROCESS

Title (de)

VERFAHREN ZUR HERSTELLUNG VON EINER WASCHMITTELZUSAMMENSETZUNG NACH OHNE-TURM-VERFAHREN

Title (fr)

PROCEDE DE PRODUCTION D'UNE COMPOSITION DETERGENTE SANS L'UTILISATION D'UNE TOUR

Publication

**EP 0929650 A1 19990721 (EN)**

Application

**EP 97929815 A 19970605**

Priority

- US 9709795 W 19970605
- US 9615881 W 19961004

Abstract (en)

[origin: WO9814557A1] A non-tower process for continuously preparing granular detergent composition having a density of at least about 600 g/l is provided. The process comprises the steps of (a) dispersing a surfactant, and coating the surfactant with fine powder in a mixer, wherein first agglomerates are formed, (b) thoroughly mixing the first agglomerates in a mixer, wherein second agglomerates are formed, and (c) granulating the second agglomerates in one or more fluidizing apparatus. The process can also comprise further step (b'), i.e., spraying finely atomized liquid onto the second agglomerates in a mixer, between step (b) and step (c).

IPC 1-7

**C11D 11/00; C11D 17/06**

IPC 8 full level

**C11D 11/00** (2006.01); **C11D 11/02** (2006.01); **C11D 17/00** (2006.01); **C11D 17/06** (2006.01); **C11D 1/14** (2006.01); **C11D 1/22** (2006.01); **C11D 1/29** (2006.01)

CPC (source: EP)

**C11D 11/00** (2013.01); **C11D 11/0082** (2013.01); **C11D 11/0088** (2013.01); **C11D 11/02** (2013.01); **C11D 17/0039** (2013.01); **C11D 17/06** (2013.01); **C11D 17/065** (2013.01); **C11D 1/146** (2013.01); **C11D 1/22** (2013.01); **C11D 1/29** (2013.01)

Citation (search report)

See references of WO 9814557A1

Designated contracting state (EPC)

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

DOCDB simple family (publication)

**WO 9814557 A1 19980409**; AR 010507 A1 20000628; AR 010508 A1 20000628; AR 010509 A1 20000628; AR 010510 A1 20000628; AR 010511 A1 20000628; AR 010729 A1 20000712; AT E223476 T1 20020915; AT E238409 T1 20030515; AT E246726 T1 20030815; AT E255159 T1 20031215; AT E255160 T1 20031215; AU 3303097 A 19980424; AU 3303197 A 19980424; AU 3378597 A 19980424; AU 3478297 A 19980424; AU 3478397 A 19980424; AU 3478497 A 19980424; AU 3478597 A 19980424; AU 3568397 A 19980424; AU 7388196 A 19980424; BR 9612732 A 19990824; BR 9711861 A 19990824; BR 9711865 A 19990824; BR 9712490 A 19991019; BR 9712492 A 19991019; BR 9713246 A 19991103; BR 9713249 A 19991103; CA 2267291 A1 19980409; CA 2267291 C 20021210; CA 2267424 A1 19980409; CA 2267424 C 20040106; CA 2268052 A1 19980409; CA 2268052 C 20031230; CA 2268055 A1 19980409; CA 2268055 C 20040203; CA 2268060 A1 19980409; CA 2268060 C 20030422; CA 2268062 A1 19980409; CA 2268062 C 20021112; CA 2268063 A1 19980409; CA 2268063 C 20021029; CA 2268067 A1 19980409; CA 2268067 C 20040106; CA 2268068 A1 19980409; CA 2268068 C 20030603; CN 1133738 C 20040107; CN 1133739 C 20040107; CN 1156560 C 20040707; CN 1156561 C 20040707; CN 1156562 C 20040707; CN 1156563 C 20040707; CN 1239506 A 19991222; CN 1239507 A 19991222; CN 1239508 A 19991222; CN 1239991 A 19991229; CN 1239992 A 19991229; CN 1239993 A 19991229; CN 1239994 A 19991229; CN 1239995 A 19991229; DE 69715224 D1 20021010; DE 69715224 T2 20030807; DE 69721287 D1 20030528; DE 69721287 T2 20040311; DE 69723986 D1 20030911; DE 69723986 T2 20040603; DE 69726439 D1 20040108; DE 69726439 T2 20040909; DE 69726440 D1 20040108; DE 69726440 T2 20040909; EP 0929645 A1 19990721; EP 0929648 A1 19990721; EP 0929648 B1 20020904; EP 0929649 A1 19990721; EP 0929649 B1 20031126; EP 0929650 A1 19990721; EP 0929650 B1 20030806; EP 0929651 A1 19990721; EP 0929651 B1 20031126; EP 0929652 A1 19990721; EP 0929653 A1 19990721; EP 0929653 B1 20030423; EP 0929654 A1 19990721; EP 0929655 A1 19990721; ES 2178778 T3 20030101; ES 2193386 T3 20031101; ES 2201305 T3 20040316; ES 2210544 T3 20040701; ES 2212109 T3 20040716; JP 2000503715 A 20000328; JP 2000503716 A 20000328; JP 2000503717 A 20000328; JP 2000503718 A 20000328; JP 2000503719 A 20000328; JP 2000503720 A 20000328; JP 2000503721 A 20000328; JP 2000504062 A 20000404; JP 2000507632 A 20000620; JP 3299981 B2 20020708; JP 3299982 B2 20020708; JP 3299983 B2 20020708; JP 3299984 B2 20020708; JP 3299985 B2 20020708; JP 3299986 B2 20020708; JP 3299987 B2 20020708; JP 3305327 B2 20020722; JP 3345022 B2 20021118; MX 219076 B 20040210; MX 219077 B 20040210; MX 9903193 A 20000131; MX 9903195 A 19990930; WO 9814549 A1 19980409; WO 9814551 A1 19980409; WO 9814552 A1 19980409; WO 9814553 A1 19980409; WO 9814554 A1 19980409; WO 9814555 A1 19980409; WO 9814556 A1 19980409; WO 9814558 A1 19980409

DOCDB simple family (application)

**US 9709795 W 19970605**; AR P970104574 A 19971003; AR P970104575 A 19971003; AR P970104576 A 19971003; AR P970104577 A 19971003; AR P970104578 A 19971003; AR P970104579 A 19971003; AT 97928871 T 19970605; AT 97928872 T 19970605; AT 97929815 T 19970605; AT 97931056 T 19970605; AT 97931058 T 19970605; AU 3303097 A 19970605; AU 3303197 A 19970605; AU 3378597 A 19970605; AU 3478297 A 19970605; AU 3478397 A 19970605; AU 3478497 A 19970605; AU 3478597 A 19970605; AU 3568397 A 19970605; AU 7388196 A 19961004; BR 9612732 A 19961004; BR 9711861 A 19970605; BR 9711865 A 19970605; BR 9712490 A 19970605; BR 9712492 A 19970605; BR 9713246 A 19970605; BR 9713249 A 19970605; CA 2267291 A 19961004; CA 2267424 A 19970605; CA 2268052 A 19970605; CA 2268055 A 19970605; CA 2268060 A 19970605; CA 2268062 A 19970605; CA 2268063 A 19970605; CA 2268067 A 19970605; CA 2268068 A 19970605; CN 97180278 A 19970605; CN 97180279 A 19970605; CN 97180280 A 19970605; CN 97180293 A 19970605; CN 97180294 A 19970605; CN 97180296 A 19970605; CN 97180297 A 19970605; CN 97180298 A 19970605; DE 69715224 T 19970605; DE 69721287 T 19970605; DE 69723986 T 19970605; DE 69726439 T 19970605; DE 69726440 T 19970605; EP 96936168 A 19961004; EP 97928871 A 19970605; EP 97928872 A 19970605; EP 97929815 A 19970605; EP 97931056 A 19970605; EP 97931057 A 19970605; EP 97931058 A 19970605; EP 97931059 A 19970605; EP 97932153 A 19970605; ES 97928871 T 19970605; ES 97928872 T 19970605; ES 97929815 T 19970605; ES 97931056 T 19970605; ES 97931058 T 19970605; JP 51648998 A 19970605; JP 51649098 A 19970605; JP 51649198 A 19970605; JP 51649298 A 19970605; JP 51649398 A 19970605;

JP 51649498 A 19970605; JP 51649598 A 19970605; JP 51649698 A 19970605; JP 53523397 A 19961004; MX 9903193 A 19961004; MX 9903195 A 19961004; US 9615881 W 19961004; US 9709789 W 19970605; US 9709790 W 19970605; US 9709791 W 19970605; US 9709792 W 19970605; US 9709793 W 19970605; US 9709794 W 19970605; US 9709796 W 19970605