

Title (en)

METHOD FOR PREPARING AN AMORPHOUS ALKALI SILICATE WITH IMPREGNATION

Title (de)

VERFAHREN ZUR HERSTELLUNG EINES AMORPHEN ALKALISILIKATS MIT IMPRÄGNIERUNG

Title (fr)

PROCEDE DE PRODUCTION D'UN SILICATE ALCALIN AMORPHE AVEC IMPREGNATION

Publication

**EP 0859827 B2 20060607 (DE)**

Application

**EP 96931031 A 19960905**

Priority

- DE 19533790 A 19950913
- EP 9603905 W 19960905

Abstract (en)

[origin: US5958864A] PCT No. PCT/EP96/03905 Sec. 371 Date Jun. 24, 1998 Sec. 102(e) Date Jun. 24, 1998 PCT Filed Sep. 5, 1996 PCT Pub. No. WO97/10325 PCT Pub. Date Mar. 20, 1997A process for producing a particulate amorphous alkali metal silicate having a molar ratio of M2O to SiO2 of 1:1.5 to 1:3.3 by a) spray-drying an aqueous mixture of amorphous alkali metal silicate, b) impregnating the spray-dried amorphous alkali metal silicate with an aqueous dispersion or solution of detergent composition components containing at least one organic component, and c) optionally drying the impregnated amorphous alkali metal silicate.

IPC 8 full level

**C11D 17/00** (2006.01); **C11D 3/08** (2006.01); **C11D 11/00** (2006.01); **C11D 11/02** (2006.01); **C11D 17/04** (2006.01); **C11D 17/06** (2006.01)

CPC (source: EP KR US)

**C11D 3/08** (2013.01 - EP US); **C11D 17/00** (2013.01 - KR)

Citation (opposition)

Opponent :

- WO 9523841 A1 19950908 - HENKEL KGAA [DE], et al
- WO 9620269 A1 19960704 - HENKEL KGAA [DE], et al
- US 3819526 A 19740625 - PIERCE R, et al
- DE 4211699 A1 19931014 - HENKEL KGAA [DE]
- EP 0486078 A1 19920520 - EKA NOBEL AB [SE]
- DE 4329384 A1 19950302 - DUERR GMBH & CO [DE]
- EP 0164514 A1 19851218 - HOECHST AG [DE]
- EP 0320770 A2 19890621 - HOECHST AG [DE]
- EP 0845028 A1 19980603 - HENKEL KGAA [DE]
- Römpf Lexikon der Chemie, Band 5, Seite 4017 (1992)
- Römpf lexikon der Chemie, Band 6, Seite 4498 (1992)
- Römpf Lexikon der Chemie, Band 3, Seite 1956 (1990)
- Römpf Lexikon der Chemie, Band 1, Seite 400 (1989)
- Produktinformation Telschig "Einarbeitung von hochviskosem Silikon zur Schaumreduktion in Waschmittelrezepturen" (1988)

Designated contracting state (EPC)

AT BE DE ES FR GB IT NL

DOCDB simple family (publication)

**US 5958864 A 19990928**; AT E202597 T1 20010715; DE 19533790 A1 19970320; DE 59607182 D1 20010802; EP 0859827 A1 19980826; EP 0859827 B1 20010627; EP 0859827 B2 20060607; ES 2160254 T3 20011101; ES 2160254 T5 20070301; HU P9900372 A2 19990528; HU P9900372 A3 20011128; JP 3889810 B2 20070307; JP H11512463 A 19991026; KR 100416832 B1 20040722; KR 19990036403 A 19990525; PL 324860 A1 19980622; SK 32098 A3 19980805; WO 9710325 A1 19970320

DOCDB simple family (application)

**US 4322298 A 19980624**; AT 96931031 T 19960905; DE 19533790 A 19950913; DE 59607182 T 19960905; EP 9603905 W 19960905; EP 96931031 A 19960905; ES 96931031 T 19960905; HU P9900372 A 19960905; JP 51163097 A 19960905; KR 19980701072 A 19980213; PL 32486096 A 19960905; SK 32098 A 19960905