

Title (en)
Enzyme stabilizing composition and the use thereof in stabilized enzyme containing built detergent compositions

Title (de)
Enzym-stabilisierende Zusammensetzung und deren Verwendung in stabilisierten Enzym enthaltenden verstärkten Waschmittelzusammensetzungen

Title (fr)
Composition stabilisante d'enzyme et son usage dans des compositions détergentes renforcées contenant l'enzyme stabilisée

Publication
EP 0451924 B1 19990210 (EN)

Application
EP 91200871 A 19910412

Priority
US 50954990 A 19900413

Abstract (en)
[origin: EP0451924A2] A three component enzyme stabilization system including boric acid, citric acid and calcium ions helps maintain the enzyme activity of aqueous built detergent compositions in accelerated aging (multiple freeze-thaw cycles). The preferred detergent compositions are "softergents" and also include a clay softener, a mixture of anionic, nonionic and amphoteric surfactants, and detergent builder(s).

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C11D 3/386

IPC 8 full level
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CPC (source: EP)
C11D 3/38663 (2013.01)

Cited by
US6153576A; US5904736A; EP2430195A4; EP1585817A4; EP0580245A3; TR28471A; DE102014218507A1; DE102008014760A1; US9133424B2; US9999217B2; US9845489B2; US7119054B2; DE102008010429A1; US7785618B2; DE102007041754A1; WO2013090559A1; WO0202727A1; WO9621716A1; WO0224851A1; DE102007011236A1; US9725703B2; US6624132B1; US7553806B2; EP0583420B1; US6537958B1; US7795199B2; US7951767B2; US8211849B2; US10064404B2; US10772319B2; US11672247B2; US10568317B2; US11116205B2

Designated contracting state (EPC)
AT BE CH DE DK ES FR GB IT LI LU NL SE

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EP 91200871 A 19910412; AT 91200871 T 19910412; AU 7400791 A 19910328; BR 9101486 A 19910412; CA 2040202 A 19910410; DE 69130880 T 19910412; DK 91200871 T 19910412; ES 91200871 T 19910412; FI 911800 A 19910412; GR 910100154 A 19910412; HK 98115361 A 19981224; IE 124591 A 19910412; MX 2528191 A 19910409; MY PI19910556 A 19910404; NO 911448 A 19910412; NZ 23757091 A 19910325; PT 9732591 A 19910411; TR 41591 A 19910415; ZA 912598 A 19910408