

Title (en)  
AQUEOUS OPTICAL BRIGHTENER COMPOSITIONS AND THEIR USE IN PAPER COATINGS

Publication  
**EP 0192600 B1 19890719 (DE)**

Application  
**EP 86810011 A 19860114**

Priority  
DE 3502038 A 19850123

Abstract (en)  
[origin: US4717502A] Aqueous optical brightener compositions consisting essentially of: (a) at least one optical brightener of formula <IMAGE> in which R1 is hydrogen or -SO3M; R2 is hydrogen or -SO3M; R3 is hydrogen, C2-3-hydroxyalkyl, C1-4-alkyl, -CH2-CH2-CN or -CH2-CH2-CONH2; R4 is hydrogen, C1-4-alkyl, C2-3-hydroxyalkyl, hydroxy-ethoxy-ethyl, N,N-Bis-(C1-3-alkyl)-amino-C2-6-alkyl or benzyl; or R3 and R4 together with the neighboring nitrogen atom signify a morpholine, pyrrolidine, piperidine or N-methylpiperazine ring; and M is hydrogen or a colorless cation; provided that at most one of R3 and R4 is hydrogen; (b) polyethylene glycol with an average molecular weight in the range of 1000 to 3000; and (c) water; 10 to 500 parts by weight of component (b) being present per 100 parts by weight of component (a), and component (c) constituting at least 20% of the composition, are storage stable optical brightener compositions, which are eminently suitable for the formulation of aqueous coating compositions especially such in which at least some of the binder is a synthetic latex; with these coating compositions there may be obtained very white coated papers which are optically brightened at least in the coating.

IPC 1-7  
**D06L 3/12; D21H 1/22**

IPC 8 full level  
**C09D 7/00** (2006.01); **C09B 67/44** (2006.01); **C09D 7/12** (2006.01); **D06L 3/12** (2006.01); **D06L 4/664** (2017.01); **D21H 19/44** (2006.01); **D21H 21/30** (2006.01)

CPC (source: EP US)  
**D06L 4/664** (2016.12 - EP US); **D21H 21/30** (2013.01 - EP US)

Citation (examination)  
• GB 930393 A  
• US 3360479 A 19671226 - HEINRICH HAUSERMANN

Cited by  
KR100712743B1; US5688758A; US6117189A; FR2654123A1; US6872282B1; WO0118310A1

Designated contracting state (EPC)  
AT CH DE FR GB IT LI NL SE

DOCDB simple family (publication)  
**US 4717502 A 19880105**; AT E44785 T1 19890815; DE 3502038 A1 19860724; DE 3664499 D1 19890824; EP 0192600 A1 19860827; EP 0192600 B1 19890719; JP S61174269 A 19860805; ZA 86526 B 19870826

DOCDB simple family (application)  
**US 82004386 A 19860121**; AT 86810011 T 19860114; DE 3502038 A 19850123; DE 3664499 T 19860114; EP 86810011 A 19860114; JP 1028886 A 19860122; ZA 86526 A 19860123