

Title (en)
ELECTROPHOTOGRAPHICAL TONER

Publication
EP 0233544 B1 19930908 (DE)

Application
EP 87101463 A 19870203

Priority
DE 3604827 A 19860215

Abstract (en)
[origin: US4812379A] Positively charged electrophotographic toners contain, in addition to conventional resin and pigment particles, an additive reinforcing the cationic charge, of the general formula <IMAGE> (I) <IMAGE> in which R1 and R2 each represent hydrogen, chlorine, bromine, hydroxyl, C1-C4-alkoxy or carboxyl, A represents C1-C5-alkylene or -C6H4-CH2-(m or p), m represents 0 to 1, n represents 1 or 2 K(+) represents <IMAGE> R3 represents C1-C18-alkyl, carbamoyl-C1-C2-alkyl, C1-C4-alkoxycarbonyl-C1-C2-alkyl, benzyl, cyclohexyl or allyl, R4 represents C1-C4-alkyl or a single bond linked to D, R5 represents C1-C4-alkyl, D represent -CH2, -CH2-CO-, -CH2-CO-NH- or -CH2-CO-NH-CH2- W represents <IMAGE> -CO- or a single bond, Z represents -CH2-, <IMAGE> -O-, -S-, -SO2- or a single bond and An(-) represents an anion.

IPC 1-7
C07D 221/14; G03G 9/08

IPC 8 full level
C07D 221/14 (2006.01); **G03G 9/08** (2006.01); **G03G 9/097** (2006.01)

CPC (source: EP US)
G03G 9/09741 (2013.01 - EP US)

Cited by
EP0355006A3; EP0501249A1; US5292881A; WO9411789A1; WO9302399A1; US10835453B2

Designated contracting state (EPC)
CH DE FR GB LI

DOCDB simple family (publication)
EP 0233544 A2 19870826; EP 0233544 A3 19900404; EP 0233544 B1 19930908; DE 3604827 A1 19870820; DE 3787297 D1 19931014; JP H0431584 B2 19920526; JP S62192755 A 19870824; US 4812379 A 19890314; US 4841052 A 19890620

DOCDB simple family (application)
EP 87101463 A 19870203; DE 3604827 A 19860215; DE 3787297 T 19870203; JP 3071887 A 19870214; US 1036487 A 19870203; US 22532988 A 19880728