

Title (en)

Calixarenes as charge control agents and toner

Title (de)

Calixarene als Ladungsstabilisatoren und Toner

Title (fr)

Calixarènes comme agent de contrôle de charge et toner

Publication

EP 0712049 B1 20010711 (EN)

Application

EP 95117332 A 19951103

Priority

JP 30286194 A 19941111

Abstract (en)

[origin: EP0712049A1] Charge control agent and toner for developing electrostatic images comprising the agent whose active ingredient is calix(n)arene compound of formula A^nI^n : <CHEM> x+y=n , x, y: integer of 1 or more; n: integer of 4 to 8; x repeat units and y repeat units can be arranged in any order; R<1>, R<2> is H, C1-12 alkyl, C7-12 aralkyl, phenyl, C4-8 cycloalkyl, halogen, nitro, amino, alkyl - or phenyl - substituted amino, - Si(CH₃)₃ or - SO₃H; of the n R radicals in the n - OR groups, 1 to (n - 1) are H, the remaining (n - 1) to 1 being alkyl, phenyl, aralkyl, cycloalkyl, - COR<3> A^nR^n : H, alkyl, phenyl, aralkyl, or cycloalkyl, - Si(CH₃)₃, - (CH₂)_mCOOR<4> A^nR^n : H or lower alkyl; m: integer of 1 to 3, - (CH₂CH₂O)_rH A^nR^n : integer of 1 to 10, or $\text{<CHEM> A}^n\text{R}^n$: integer of 1 to 10

IPC 1-7

G03G 9/097

IPC 8 full level

G03G 9/09 (2006.01); **G03G 9/097** (2006.01)

CPC (source: EP)

G03G 9/09733 (2013.01); **G03G 9/09775** (2013.01)

Cited by

EP0801332A1; US5736289A; US5972554A; EP0875793A3; US10474050B2; US9835965B2

Designated contracting state (EPC)

CH DE FR GB LI

DOCDB simple family (publication)

EP 0712049 A1 19960515; **EP 0712049 B1 20010711**; DE 69521662 D1 20010816; DE 69521662 T2 20020711; JP 3325730 B2 20020917; JP H08137138 A 19960531

DOCDB simple family (application)

EP 95117332 A 19951103; DE 69521662 T 19951103; JP 30286194 A 19941111