

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
3 September 2009 (03.09.2009)

PCT

(10) International Publication Number
WO 2009/108474 A1

(51) International Patent Classification:
C09D 9/00 (2006.01)

(21) International Application Number:
PCT/US2009/033148

(22) International Filing Date:
5 February 2009 (05.02.2009)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
61/032,449 29 February 2008 (29.02.2008) US

(71) Applicant (for all designated States except US):
MALLINCKRODT BAKER, INC. [US/US]; 222 Red
School Lane, Phillipsburg, New Jersey 08865 (US).

(72) Inventor; and

(75) Inventor/Applicant (for US only): **GEMMILL,**
William, R. [US/US]; 410 2nd Avenue, 2nd floor, Beth-
lehem, Pennsylvania 18018 (US).

(74) Agents: **COOKE, Christine, R.** et al.; Mallinckrodt Inc.,
675 McDonnell Boulevard, Hazelwood, Missouri 63042
(US).

(81) Designated States (unless otherwise indicated, for every
kind of national protection available): AE, AG, AL, AM,
AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ,
CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DO, DZ,
EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN,
HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR,
KZ, LA, LC, LK, LR, LS, LT, LU, LY, MA, MD, ME,
MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO,
NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG,
SK, SL, SM, ST, SV, SY, TJ, TM, TN, TR, TT, TZ, UA,
UG, US, UZ, VC, VN, ZA, ZM, ZW.

(84) Designated States (unless otherwise indicated, for every
kind of regional protection available): ARIPO (BW, GH,
GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM,
ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ,
TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV,
MC, MK, MT, NL, NO, PL, PT, RO, SE, SI, SK, TR),
OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML,
MR, NE, SN, TD, TG).

Published:

— with international search report (Art. 21(3))

(54) Title: MICROELECTRONIC SUBSTRATE CLEANING COMPOSITIONS

(57) Abstract: A microelectronic cleaning compositions of: a) from about 80 % to about 99 % by weight of the composition of at least one organic sulfone; b) from about 0.5 % to about 19 % by weight of the composition of water; and c) from about 0.5 % to about 10 % by weight of the composition of at least one component providing tetrafluoroborate ion, and d) optionally at least one polyhydric alcohol. is especially useful to clean etch/ash residues from microelectronic substrates or device having both Si-based anti-reflective coatings and low-k dielectrics.



WO 2009/108474 A1