

**PCT**WORLD INTELLECTUAL PROPERTY ORGANIZATION
International Bureau

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : C11D 3/20, 1/75, 3/43	A1	(11) International Publication Number: WO 97/44427 (43) International Publication Date: 27 November 1997 (27.11.97)
(21) International Application Number: ✓ PCT/US97/08301 (22) International Filing Date: ✓ 20 May 1997 (20.05.97) (30) Priority Data: 60/018,234 ✓ 24 May 1996 (24.05.96) ✓ US 9617648.2 ✓ 23 August 1996 (23.08.96) ✓ GB (71) Applicant (for all designated States except US): RECKITT & COLMAN INC. [US/US]; 225 Summit Avenue, Montvale, NJ 07645 (US). ✓ (72) Inventor; and (75) Inventor/Applicant (for US only): FENG, James, Chi-Cheng [US/US]; 824 Inwood Terrace, Ft. Lee, NJ 07024 (US). ✓ (74) Agents: PARFOMAK, Andrew, N. et al.; Fish & Richardson P.C., Suite 2800, 45 Rockefeller Plaza, New York, NY 10111 (US).		(81) Designated States: AL, AM, AT, AU, AZ, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IL, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TR, TT, UA, UG, US, UZ, VN, ARIPO patent (GH, KE, LS, MW, SD, SZ, UG), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, ML, MR, NE, SN, TD, TG). Published <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
(54) Title: ALKALINE AQUEOUS HARD SURFACE CLEANING COMPOSITIONS ✓ (57) Abstract Alkaline aqueous hard surface cleaning compositions which exhibit good cleaning efficacy against hardened dried or baked on greasy soil deposits. They are storage stable, and are not undesirably irritating to the skin or mucous tissues of the user. These compositions comprise in percent by weight (based on 100 % total weight of a composition): 0.01-0.85 wt.% nonionic surfactant compound based on an amine oxide; 0-1.5 wt.% chelating agent; 0.01-2.5 wt.% caustic; 3.0-9.0 wt.% glycol ether solvent system comprising one glycol ether or glycol ether acetate solvent having a solubility in water of not more than 20 wt.%, and a second glycol ether or glycol ether acetate having a solubility of approximately 100 wt.%, wherein the ratio of the former to the latter is from 0.5:1 to 1.5:1; 0-5.0 wt.% of a water soluble amine containing organic compound, 0-2.5 wt.% soil anti-redeposition agent; 0-2.5 wt.% optional constituents. The compositions according to the invention contain no anionic or cationic type surfactant constituents, and include no more than 10 wt.% of volatile organic constituents (VOCs). Methods for the use of such cleaning compositions, and processes for their production are also disclosed.		