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(21) International Application Number: PCT/NL95/00295 (22) International Filing Date: 31 August 1995 (31.08.95) (30) Priority Data: 9401433 2 September 1994 (02.09.94) NL (71) Applicants (for all designated States except US): AKZO NOBEL N.V. [NL/NL]; Velperweg 76, NL-6824 BM Arnhem (NL). ENGELHARD DE MEERN B.V. [NL/NL]; Strijkviertel 67, NL-3454 PK De Meern (NL). SHELL INTERNATIONALE RESEARCH MAATSCHAPPIJ B.V. [NL/NL]; Carel van Bylandtlaan 30, NL-2596 HR The Hague (NL). (72) Inventors; and (75) Inventors/Applicants (for US only): VOGELS, Roland, Jacobus, Martinus, Josephus [NL/NL]; Reitdiepstraat 75/1a, NL-3522 GG Utrecht (NL). GEUS, John, Wilhelm [NL/NL]; Gezichtslaan 100, NL-3723 GJ Bilthoven (NL). (74) Agent: SMULDERS, Th., A., H., J.; Vereenigde Octrooibureaux, Nieuwe Parklaan 97, NL-2587 BN The Hague (NL).		(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, <u>SI</u> , SK, TJ, TM, TT, UA, UG, US, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, 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), ARIPO patent (KE, MW, SD, SZ, UG). Published <i>With international search report.</i>
(54) Title: SYNTHETIC SWELLING CLAY MINERALS		
(57) Abstract Swelling clay minerals are made up of elementary three-layer platelets consisting of a central layer of octahedrally oxygen-surrounded metal ions (octahedron layer), which layer is surrounded by two tetrahedrally surrounded, silicon atom-containing layers (tetrahedron layers), a number of such elementary platelets being optionally stacked. The dimensions of the clay platelets vary from 0.01 μm to 1 μm, the number of the stacked elementary three-layer platelets varies from on average one platelet to twenty platelets, while in the octahedron layer at most 30 at.% of the metal ions has been replaced by ions of a lower valency and in the tetrahedron layers at most 15 at.% of the silicon ions has been replaced by ions of a lower valency, such a replacement having taken place in at least one of these layers and these layers having a deficiency of positive charge because of the replacement. They are prepared by bringing the pH of an aqueous liquid containing the components of the clay to a value of 3-9 and the temperature of the liquid to a value of from 60 to 350 °C and maintaining it at said value for the time required for the reaction, the pH being maintained at a value within said range.		

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