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(71) Applicant (for all designated States except US): **J.M. HUBER CORPORATION** [US/US]; A Corporation of The State of New Jersey, 333 Thornall Street, Edison, NJ 08837 (US).

(72) Inventors: **MCGILL, Patrick, D.**; 2215 Price Road, Darlington, MD 21034 (US). **FULTZ, William, C.**; 1114 Telegraph Road, Rising Sun, MD 21911 (US).

(74) Agents: **NIEVES, Carlos** et al.; J.M. Huber Corporation, 333 Thornall Street, Edison, NJ 08818 (US).

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(54) Title: HIGH-CLEANING SILICA MATERIALS AND DENTIFRICE CONTAINING SUCH

(57) Abstract: Unique abrasive and/or thickening materials that are *in situ* generated compositions of precipitated silicas and silica gels are provided. Such compositions exhibit different beneficial characteristics depending on the structure of the composite *in situ* generated material. With low structured composites (as measured via linseed oil absorption levels from 40 to 100 ml oil absorbed/100g composite), simultaneously high pellicle film cleaning properties and moderate dentin abrasion levels are possible in order to accord the user a dentifrice that effectively cleans tooth surfaces without detrimentally abrading such surfaces. Increased amounts of high structure composite materials tend to accord greater viscosity build and thickening benefits together with such desirable abrasion and cleaning properties, albeit to a lesser extent than for the low structure types. Thus, mid-range cleaning materials will exhibit oil absorption levels from an excess of 100 to 150, and high thickening/low abrasion composite exhibit oil absorption properties in excess of 150. Such an *in situ*, simultaneously produced precipitated silica/silica gel combination provides such unexpectedly effective low abrasion and high cleaning capability and different thickening characteristics as compared to physical mixtures of such components. Encompassed within this invention is a unique method for making such gel/precipitated silica composite materials for such a purpose, as well as the different materials within the structure ranges described above and dentifrices comprising such.

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