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(54) **AQUEOUS SUPER ABSORBENT POLYMER AND METHODS OF USE**

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See application file for complete search history.

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(57) **ABSTRACT**

The present invention relates to a crosslinked aqueous solution polymer composition consisting of about 15 wt-% to about 50 wt-% of at least one water soluble monomer, preferably an alpha, beta-ethylenically unsaturated carboxylic acid monomer and a crosslinking agent. The polymer solution is sufficiently low enough in viscosity such that it can be applied in aqueous form, yet after crosslinking possesses a fast rate of acquisition and is high absorption capacity. The invention also relates to new methods of enhancing the absorbency of various articles, increasing the humectancy and/or absorbency of a fiber or fibrous matrix, improving the water retention of soil and other agricultural methods, and increasing the open time of cement by incorporating or applying an aqueous superabsorbent polymer composition.

10 Claims, No Drawings