United States Patent [19]

Sparapany et al.

[11] **Patent Number: 4,921,904**

[45] **Date of Patent: May 1, 1990**

[54] **SUPERABSORBENT POLYMERS**

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[21] Appl. No.: **286,106**

[22] Filed: **Dec. 19, 1988**

[51] **Int. Cl.**[5] **C08F 8/32**

[52] **U.S. Cl.** **525/329.9**; 525/329.5; 525/379; 525/382

[58] **Field of Search** 525/329.9, 329.5

[56] **References Cited**

U.S. PATENT DOCUMENTS

3,669,103	6/1972	Harper et al.	128/156
3,670,731	6/1972	Harmon	604/368
4,062,817	12/1977	Westerman	526/271
4,076,663	2/1978	Masuda et al.	525/54.31
4,286,082	8/1981	Tsubakimoto et al.	526/240
4,340,706	7/1982	Obayashi et al.	526/207
4,654,039	3/1987	Brandt et al.	526/207
4,666,983	5/1987	Tsubakimoto et al.	525/329.9

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[57] **ABSTRACT**

A substantially water-insoluble, slightly cross-linked, partially neutralized, hydrogen-forming polymer composition consisting essentially of

(a) from about 50 mole percent to 99.999 mole percent of polymerizable acid group-containing monomers, and

(b) from about 0.001 mole percent to 10 mole percent of a water-soluble polyamine;

said hydrogel-forming polymer composition having been formed by reacting a water-soluble acid group-containing vinyl polymer with a water-soluble polyamine at a temperature sufficient to convert the substantial portion of the amino groups of the water-soluble polyamine into amido groups.

2 Claims, No Drawings