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2.2 Polymerization and Fabrication 2.2.1 Hydrogels; 2.3 Properties; 2.3.1 Swelling of Hydrogels; 2.4 Applications; 2.4.1 Papermaking; 2.4.2 Textile Applications; 2.4.3 Adhesive Applications; 2.4.4 Corrosion Inhibition; 2.4.5 Membranes; 2.4.6 Medical Applications; 2.5 Suppliers and Commercial Grades; 2.6 Safety; 2.7 Environmental Impact and Recycling; Tradenames; References; 3 Polysaccharides; 3.1 Polymers; 3.2 Starch; 3.2.1 Modified Starch Types; 3.2.2 Uses of Starch Compositions; 3.3 Chitosan; 3.3.1 Nanoparticles; 3.3.2 Deodorizing Preparations; 3.3.3 Contact Lens Solutions 3.3.4 Intranasal Protein Drug Delivery 3.4 Carboxymethyl cellulose; 3.4.1 Thickeners; 3.4.2 Superabsorbent Polymers; 3.4.3 Papermaking; 3.4.4 Textile Printing; 3.4.5 Laundry Compositions; 3.4.6 Shaped Activated Carbon; 3.4.7 Cosmetics and Medical; 3.4.8 Enzyme Activity; 3.5 Guar; 3.5.1 Phase Separated Solutions; 3.5.2 Fracturing Fluids; 3.6 Carrageenan; 3.6.1 Medical Applications; 3.6.2 Other Applications; 3.7 Suppliers and Commercial Grades; Tradenames; References; 4 Poly((meth)acrylic acid); 4.1 Monomers; 4.1.1 Acrylic acid; 4.1.2 Methacrylic acid; 4.2 Polymerization and Fabrication 4.2.1 Copolymers 4.2.2 Hydrolysis of Poly(acrylamide); 4.2.3 Slightly Crosslinked Polymers; 4.3 Properties; 4.4 Applications; 4.4.1 Superabsorbent Polymers; 4.4.2 Viscosifier for Aqueous Compositions; 4.4.3 Laundry Detergents; 4.4.4 Emulsifier Compositions; 4.4.5 Pulps; 4.4.6 Surface Coating; 4.4.7 Polishing Integrated Circuits; 4.4.8 Anti Reflective Coatings in Semiconductor Technology; 4.4.9 Crosslinked Cellulose; 4.4.10 Teeth Bleaching Gel; 4.4.11 Oil Field Applications; 4.5 Suppliers and Commercial Grades; Tradenames; References; 5 Poly(acrylamide); 5.1 Monomers 5.2 Polymerization and Fabrication 5.3 Properties; 5.3.1 Mechanical Properties; 5.3.2 Acoustic Properties; 5.3.3 Thermal Properties; 5.4 Special Additives; 5.5 Applications; 5.5.1 Membranes; 5.5.2 Sensors; 5.5.3 Flocculants; 5.5.4 Hydrogels; 5.5.5 Agriculture; 5.5.6 Remediation of Acid Spills; 5.5.7 Concrete Compositions; 5.5.8 Paper Additives; 5.5.9 Oil Field Applications; 5.5.10 Protein Analysis; 5.6 Suppliers and Commercial Grades; 5.7 Safety; 5.8 Environmental Impact and Recycling; Tradenames; References; 6 Poly(vinylamine); 6.1 Monomers; 6.2 Polymerization and Fabrication 6.2.1 Poly(N-vinylamine)

Sommario/riassunto

"This book focuses on common types of polymers belonging to the class of water soluble polymers. It covers a wide range of applications: food, cosmetic, medical, lithography and ink jet printing, agricultural, wastewater cleaning, and oilfield. The text is arranged according to the chemical constitution of polymers and reviews the developments that have taken place in the last decade. Each chapter follows the same template"--