Water soluble polymers cover a wide range of highly varied families of products of natural or synthetic origin, and have numerous uses. A water soluble polymer is a polymer that can be diluted in water, with or without the assistance of co-solvents and neutralizing agents, to form transparent solutions. They may be classified into two types, totally synthetic polymers and natural products together with their chemically modified derivatives and further can be grouped into three main headings; naturally occurring, semi-synthetic and completely synthetic polymers. The water based polymers are quick drying, non-inflammable, having mild odour and more environmentally acceptability than any other polymers. Most conventional coating polymers at present can be produced in a form that will allow them to be solubilized in water. These include alkydes, polyesters, acrylics epoxies. There are various types of polymerization methods of water soluble polymers such as bulk polymerization, solution polymerization, copolymerization, emulsion polymerization and suspension polymerization. Water soluble polymers are used widely as stabilizers or protective colloids in emulsion polymerization. Its most common use are gum acacia, starch either etherified or in its degraded form, dextrin, polyvinyl alcohol and hydroxyethyl cellulose. Polymers find many applications in oil recovery and production, including areas such as; drilling fluids, cementation of well bore, reservoir fracturing, controlling fluid flow in the reservoir and multistage processes of oil production and refining. The water soluble polymers market encompasses several categories, including starch, cellulose ethers, polyvinylacetate, polyvinyl alcohol and other synthetic water soluble polymers. The starch market is the largest.

This book basically deals with flow characteristics of water soluble polymer solutions, emulsion polymerization, water reducible resins, silicone modified alkyds and polyesters, cross linking of water soluble coatings, formulation of water soluble coatings, trouble shooting with water soluble polymers, acrylic solution resins, polyvinylpyrrolidone, commercial uses: compounding and formulating adhesives, methods of polymerization, methods for polymerization of acrylamide, fabrication of water soluble polymers, excluded volume interactions of neutral polymers etc. The book covers classification of water soluble polymers, processes, properties, uses and applications of water soluble polymers with lot of other information. This book will be very resourceful for new entrepreneurs, existing units, technocrats, researchers and technical libraries.
Thixotropes and Thickeners
Volatile Additives
Pigments
Formulation of Water-soluble Coatings
Solubilization of Polymers
Trouble Shooting with Water-soluble Polymers
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Rheological Properties
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Commercial Uses: Compounding and formulating Adhesives
Industrial Supplies
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Paints and Paint Removers
Pharmaceuticals
Printing Products
Soap, Detergents, and Personal Care Products
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Binder
Coatings and Sizes
Dispersant
Flocculation
Hydrodynamic Drag Reduction
Thermoplastics Manufactures
Thickening/Rheology Control
Water Retention
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Calamine Lotion
Denture Flexative Powder
Detergent Bars
Detergent Liquid
Lithographic Press Dampening Fluid
Micro Encapsulation
Paint and Varnish Remover
Thickened Acetic Acid
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Thickened Sulfuric Acid
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7. CHEMICAL MODIFICATIONS
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9. COMPOUNDING OF WATER SOLUBLE POLYMERS
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10. POLYMERIZATION OF WATER SOLUBLE POLYMERS
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15. AQUEOUS SOLUTIONS OF POLYELECTROLYTES

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