

The Complete Book on Water Soluble Polymers

Author:- NPCS Board of Consultants & Engineers

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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.

1. WATER-SOLUBLE POLYMERS Classification

Synthetic Polymers
Natural Products and their Derivatives
Properties of Cellulose Ethers
Degree of Polymerization
Degree of Substitution
Molar Substitution
Application
Basic Concepts of Rheology
Flow Characteristics of Water Soluble Polymer Solutions
Thixotropy
Uses
Latex Paints
Emulsion Polymerization
Other Applications
2. WATER-REDUCIBLE RESINS
History
Water-soluble Polymers
Maleinized Drying Oils
Alkyd Resins
Acrylic-modified Water-soluble Alkyds
Polyesters
Silicone-modified Alkyds and Polyesters
Epoxy Resins
Acrylics
Amino Resins
Other Water-soluble Polymers
Viscosity Characteristics
Amines
Viscosity
Drying
Stability
Gloss
Foam Control
Colour Retention
Toxicity
Variation of Amine Levels
Cosolvents
Coupling Efficiency
Viscosity
Stability
Drying Properties
Foam Control
Driers for Air Dry and Force Dry Systems
Cross-linking of Water-soluble Coatings
Additives for Coatings
Driers and Drier Accelerators
Surfactants
Flow Modifiers
Thixotropes and Thickeners
Volatile Additives
Pigments
Formulation of Water-soluble Coatings
Solubilization of Polymers

Trouble Shooting with Water-soluble Polymers

Vehicle Separation

Low Opacity

Photographing of Surface Defects

Viscosity Variations

Foaming and Air Entrapment

Sags and Runs

Poor Flow, Levelling and Orange Peel

Low Gloss and Micro Wrinkles

Flooding and Floating

Cratering and Pinholing

Picture Framing and Fat Edges

Blistering and Solvent Popping

3. ACRYLIC SOLUTION RESINS

Terminology

Backbone Monomers

Synthesis

Addition Polymerization

Copolymerization

Thermoplastic Acrylics

Selection of Monomer

Solution Polymerization

Properties and End Uses

Thermosetting Acrylics

Selection of Monomer

Classification and Properties

Acrylamide Copolymers

Acid Copolymers

Hydroxy Copolymers

Curing Reactions

Aqueous Solution Acrylics

Non-Aqueous Dispersions (NAD)

4. POLYVINYLPYRROLIDONE

Introduction

Chemical Nature

Physical Properties

Manufacture

Toxicological Properties

PVP Films

Compatibilities

Future Developments

Application of PVP

Pharmacy

Medicine

Beverages

Cosmetics and Toiletries

Textiles

Paper

Adhesives

Detergents and Soaps

Polymers and Polymerization

Agricultural

Photography and Lithography

5. POLY (ETYLENE OXIDE)

Introduction

Chemical Nature

Physical Properties

Manufacture

Biological/Toxicological Properties

Rheological Properties

Additives/Extenders

Applications

Application Procedures

Commercial Uses: Compounding and formulating Adhesives

Industrial Supplies

Constructions Products

Paints and Paint Removers

Pharmaceuticals

Printing Products

Soap, Detergents, and Personal " Care Products

Water-Soluble Films

Commercial Uses: Processing Aids

Binder

Coatings and Sizes

Dispersant

Flocculation

Hydrodynamic Drag Reduction

Thermoplastics Manufactures

Thickening/Rheology Control

Water Retention

Industries Using Polyethylene Oxide

Formulations

Aluminum and Metal Cleaner

Calamine Lotion

Denture Flexative Powder

Detergent Bars

Detergent Liquid

Lithographic Press Dampening Fluid

Micro Encapsulation

Paint and Varnish Remover

Thickened Acetic Acid

Thickened Hydrochloric Acid (Muriatic Acid)

Thickened Sulfuric Acid

Rubber Lubricant (For Mounting of Tires)

Toothpastes

6. METHODS OF POLYMERIZATION

Acrylamide

Initiation Methods

Single Component Initiators

Redox Initiators

Mechanism of Initiation

Dependence of Polymerization on Temperature

Propagation and Termination

Effect of pH

Effect of Monomer Concentration

Effect of Polymerization Medium

Inorganic Salts
Effect of Surfactants
Nature of the Termination Process
Substituted Acrylamides
Heat of Polymerization
Methods for Polymerization of Acrylamide
Acrylic and Methacrylic Acids
Effect of pH
Effect of Polymerization Medium
N-vinyl Pyrrolidone (NVP)
Other Water Soluble Polymers
Vinyl Alkyl Ethers
Ethylene Oxide (Cyclic Ether)
Ethylene Imine
Conclusions

7. CHEMICAL MODIFICATIONS

Cross-Linking with Functional Groups
Cross-Linking by Hydrogen Bonding
Effects of Cross-Linking on the Physical Properties of Polymers
Principal Types of Water-soluble Polymers
Determination of Cross-linking Density
Chemical Reactions of Water Soluble Polymers
Reactions of Cellulose and Starch
Structure and Cross-Linking Reactions of Proteins
Cross-Linking Reactions Involving Metal Ions

8. FABRICATION OF WATER SOLUBLE POLYMERS

Extrusion
Molding
Calendering
Thermoforming
Bonding
Foams
Plastisol Processing

9. COMPOUNDING OF WATER SOLUBLE POLYMERS

Compound Ingredients
Plasticized Poly(vinyl Chloride)
Plastisols
Techniques

10. POLYMERIZATION OF WATER SOLUBLE POLYMERS

Bulk Polymerization
Effect of Oxygen
Solution Polymerization
Chain Transfer and Molecular-Weight Control
Copolymerization
Industrial Manufacture
Emulsion Polymerization
Suspension Polymerization
Solution and Bulk Polymerization

11. PROPERTIES OF WATER SOLUBLE POLYMERS

Structure
Property Values
Testing
Specifications

Degradation and Stabilization

12. SOLUTION THERMODYNAMICS OF NON-IONIC WATER SOLUBLE POLYMERS

Experimental Techniques

Theory

Comparison with Aqueous Solutions

Possible Reasons for the Deviations

The Hydrophobic Interaction

Evidence for Hydrophobic Interaction for Polyoxyethylene Solutions

Aggregation

Conformation

13. FRACTIONATION AND CHARACTERIZATION

Molar Mass and Its Distribution

Preparative Fractionation

Molar Mass Measurement

Reference Methods

Solution Viscosity

Analytical Size-exclusion Chromatography

Characterization of Polyacrylamide

14. WATER SOLUBILITY AND SENSIVITY

Scope and Classification

Thermodynamic Formalism

Experimental Data

Hydrophobic Effects

Concentrated Solutions

Non-Equilibrium Behaviour: Bound and Unfreezable Water

Time Dependent Properties

Conclusions

15. AQUEOUS SOLUTIONS OF POLYELECTROLYTES

The Phenomenological Approach

The Theoretical Approach

16. POLYMER SMALL MOLECULE INTERACTIONS

Interaction of Polymers with Water

(i) Hydrophobic Interactions

(ii) Hydrophilic Interactions

Interaction with Ions

Interaction with Surfactants

17. EXCLUDED VOLUME INTERACTIONS OF NEUTRAL POLYMERS

General Thermodynamic Relationships

Expression of Chemical Potentials in Terms of Composition

Binary (One-Solute) and Ternary (Two-Solute) Systems

Consequences of Non-Ideality

Excluded-Volume Interaction of Polymers

Approximate Expression of Available Volume

Effect of Concentration on the Configuration of Chain-Polymers

Some Experimental Examples

18. POLYMER ADSORPTION

Theoretical Predictions

Experimental Methods

(a) Macroscopic Interfaces

(b) Particulate Dispersions

Experimental Results

19. POLYVINYL ALCOHOL

General

Film Solubility and Swelling in Water
Solubility in Organic Solvents
Properties of Polyvinyl Alcohol Films
Gelling and Precipitation of Polyvinyl Alcohol
Conclusion

20. ROLE OF POLYMERS IN THE STABILIZATION OF DISPERSE SYSTEMS

The Attractive Interaction
General Methods for Imparting Colloid Stability
Steric Stabilization
The Phenomenology of Flocculation
Identification of the Critical Flocculation Point
Notes on the Theta-point
Classification of Sterically Stabilized Dispersions
The Unimportance of Dispersion Forces in Incipient Flocculation
Qualitative Discussion of the Origins of Steric Stabilization
Non-Aqueous (and some aqueous) Dispersions
Aqueous Dispersions
Quantitative Calculation of Repulsive Potential Energy
Enhanced Steric Stabilization
Elastic Steric Stabilization in Polymer Melts
Heterosteric Stabilization
Depletion Stabilization
Schematic Representation of the Effects of Idealized High Molecular Weight Polymer

21. WATER SOLUBLE POLYMERS AS STABILIZERS

Adsorption Behaviour of Water-Soluble Polymers
a. Adsorption on "Model" Polymer Dispersions
b. Adsorption on Inorganic Dispersions
c. Effect of Low Molecular Weight Surfactants on Adsorption
Interactions of Water-Soluble Polymers with Surfactants
Effects of Water-Soluble Polymers Added to Dispersions
Water-Soluble Polymers as Stabilizers in Dispersion Polymerization
a. Technological Aspects
b. The Function of WSPs in Polymerizing Dispersions

22. POLYMERIC FLOCCULANTS

Nature of Polymeric Flocculants
Bridging Flocculation
Adsorption Mechanisms
Flocculation by Bridging
Kinetic Aspects of Bridging Flocculation
Charge Neutralization

23. THERMOREVERSIBLE GELATION

Conclusion

24. WATER SENSITIVE GELS

Structure of Synthetic Hydrogels
Preparation

Swelling of Gels
Surface Properties

25. RHEOLOGICAL CHARACTERIZATION OF SOLUTION AND GEL

Interpretation of Results
Concentrated Solutions
Polymer Networks
Surface and Interfacial Rheological Behaviour

26. THE INTERFACE BETWEEN AQUEOUS POLYMER SOLUTION AND ITS APPLICATION

Types of Water-Soluble Polymers

Technological Aspects

Scientific Aspects

Interaction Forces

27. POLYMERS IN OIL RECOVERY AND PRODUCTION

Operations Employing Polymers

Drilling Fluids

Cementing Fluids

Fracturing Fluids

Mobility Control for Water Flood Recovery

Polymers Employed in Reservoir Preparation and Oil Recovery

Cellulose Derivatives

Naturally Occurring Gums and their Derivatives

Starch and Its Derivatives

Acrylamide Polymers

Oil Production Polymers

Scale Formation

Corrosion Inhibitors

Demulsifiers

28. MEDICAL AND PHARMACEUTICAL APPLICATIONS

Polymers Used Therapeutically/Prophylactically

Biomedical/Prosthetic Uses

Pharmaceutical Applications

Processing and Formulation Aids; Disintegrants

Tablet Coating

Microencapsulation

Sustained Drug Delivery

Degradation

Disintegration and Dissolution of Polymers

Diffusion

Drug Complexing Agents

Stabilization of Dispersions/Controlled Flocculation

Conclusion

29. APPLICATIONS OF POLYMER EMULSIONS FOR

WATER-BASED PAINTS

Historical Changes in Demand

Selection of Raw Materials

Monomers

Range of Products

Resin Emulsions: Thermoplastic Type

Polyvinyl Acetate Emulsions

Vinyl Acetate - Acrylic Copolymers

Styrene Acrylic Copolymer Emulsions

Vinyl Acetate - Veova Copolymers

Acrylic Emulsions

Film Forming Mechanism

30. AQUEOUS POLYURETHANE DISPERSION TECHNOLOGY – AN UPDATE

Introduction

Concept of Aqueous Pud

(1) Definition

(2) Dispersion Behaviour

(3) Film Formation

Chemical Classification

- (1) Anionic
- (2) Cationic
- (3) Nonionic

Preparation Procedures

- (1) Acetone Process
- (2) Prepolymer Mixing Process
- (3) Hot-Melt Process
- (4) Ketamine/Ketazine Process
- (5) Self-Dispersing of Solids

Chemical Crosslinking

- (1) Blocked Isocyanates
- (2) Radiation Induced Crosslinking
- (3) Crosslinking with Melamine/Formaldehyde Resin
- (4) Aziridines
- (5) Zirconium Compounds

Factors Influencing Performance

- (1) Type of Polyols
- (2) Type of Isocyanates
- (3) NCO/OH Ratio
- (4) Effect of Pendant Functionality
- (5) Effect of Catalysts
- (6) Particle Size
- (7) Glass Transition Temperature (T_g)
- (8) Molecular Weight
- (9) Intermolecular Forces
- (10) Crosslinking Density

Recent Advances

- (1) Improvement in Storage Stability
- (2) Improvement in Water and Chemical Resistance
- (3) Improvement in Mechanical Properties
- (4) Improvement in Other Important Properties

Combination of PUD with acrylics

Characterisation of Aqueous PUDs

- (1) Abrasion Resistance
- (2) Solvent Resistance
- (3) Thermal Analysis
- (4) Fourier Transform - Infra Red Spectroscopy (FT-IR)

Applications

The Future

Acknowledgment

31. MAINTENANCE COATINGS BASED ON WATERBORNE DISPERSIONS

Introduction

Formulating Principles

Pigments

Additives

Binders

Acrylics/Vinyls/Vinyl-Acrylic Emulsions

Polyurethane Dispersions

Cross Linking

Epoxy Dispersions

Miscellaneous Systems

Conclusion

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NIIR PROJECT CONSULTANCY SERVICES, 106-E, Kamla Nagar, New Delhi-110007, India.
Email: npcs.india@gmail.com **Website:** NIIR.org

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