Phenolic Resins Technology Handbook (2nd Revised Edition)

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Phenolic resins, also known as phenol–formaldehyde resins, are synthetic polymers that are produced from the reaction of phenol or substituted phenol with formaldehyde at high temperatures. These are widely used in wood adhesives, molding compounds, and laminates. The resins are flame-retardant, demonstrate high heat resistance, high tensile strength, and low toxicity, and generate low smoke. In the report, the phenolic resins market is segmented on the basis of product type, application, and region.

Phenolic Resin Market size estimated to reach at USD 19.13 billion in 2026. Alongside, the market is anticipated to grow at a CAGR of 5.4% during the forecast period. The global phenolic resins market has experienced a notable growth and it has been projected that the global market will see stable growth during the forecast period. The high mechanical strengths, low toxicity, heat resistance, low smoke and other several properties has made the phenolic resins to make their use in the applications such as in laminations, wood adhesives, molding compound, construction, automobile and others. Growing demand of these applications has increased the production of phenolic resins to meet the current market demand. Also, phenolic resins is used in flame retardant which is very crucial for automobiles and aircrafts.

This book basically deals with general reaction of phenols with aldehydes, the resoles, curing stages of resoles, kinetics of a stage reaction, chemistry of curing reactions, kinetics of the curing reaction, the novolacs, decomposition products of resites, acid cured resites, composition of technical resites, mechanisms of rubber vulcanization with phenolic resins, thermosetting alloy adhesives, vinyl phenolic structural adhesives, nitrile phenolic structural adhesives, phenolic resins in contact adhesives, chloroprene phenolic contact adhesives, nitrile phenolic contact adhesives, phenolic resins in pressure sensitive adhesives, rubber reinforcing resins, resorcinol formaldehyde latex systems, phenolic resin chemistry, bio-based phenolic resins, flexibilization of phenolic resins, floral foam (Phenolic Foam) with resin manufacturing, lignin-based phenol formaldehyde (LPF) resins, phenol formaldehyde resin, alkaline phenol formaldehyde resin, furfuryl alcohol phenol urea formaldehyde resin, phenol formaldehyde resin (Shell Sand Resin), phenol formaldehyde resin (Cold Box Resin), effluent treatment plant, standards and legislation, marketing of thermoset resins, process flow sheet, sample plant layout and photographs of machinery with supplier’s contact details.

A total guide of phenolic resins and entrepreneurial success in one of today's most lucrative resin industry. This book is one-stop guide to one of the fastest growing sectors, where opportunities abound for manufacturers, retailers, and entrepreneurs. This is the only complete handbook on Phenolic resins.

Contents

1. HISTORICAL DEVELOPMENT OF PHENOLIC RESINS

2. RAW MATERIALS
Phenols, Physical Properties of Phenol, Cumene Process (Hock Process), Cresols and Xylenols â€" Synthesis Methods, Alkylphenols, Phenols from Coal and Petroleum, Other Phenolic Compounds, Resorcinol, Bisphenol-A, Formaldehyde, Properties and Processing, Paraformaldehyde, Trioxane and Cyclic Formals, Hexamethylenetetramine, HMTA, Furfural, Other Aldehydes

3. CHEMICAL STRUCTURE
General Reaction of Phenols with Aldehydes, The Resoles, Curing Stages of Resoles, Kinetics of A-Stage Reaction, Chemistry of Curing Reactions, Kinetics of the Curing Reaction, The Novolacs, Decomposition Products of Resites, Acid-Cured Resites, Composition of Technical Resites

4. PHENOLIC RESINS FROM HIGHER ALDEHYDES
Acetaldehyde, Butyraldehyde, Chloral, Furfural, Acrolein

5. PHENOLIC RESINS FROM POLYHYDRIC PHENOLS

6. REACTION MECHANISMS
Molecular Structure and Reactivity of Phenols, Formaldehyde-Water and
Formaldehyde-Alcohol Equilibria, Phenol-Formaldehyde Reaction under Alkaline Conditions, Inorganic Catalysts and Tertiary Amines, Ammonia, HMTA and Amine-Catalyzed Reactions, Reaction Kinetics of the Base-Catalyzed Hydroxymethylation, Prepolymer Formation, Resole Cross-Linking Reactions. Quinone Methides, Acid Curing, Heat Curing, Phenol-Formaldehyde Reactions under Acidic Conditions, Reaction Kinetics in Acidic Medium, Reaction under Weak Acidic Conditions. â€œHigh-Orthoâ€Â•-Novolak Resins, Novolak Cross-Linking Reaction with HMTA, Reaction with Epoxide Resins, Reactions with Diisocyanates

7. THE PHYSICAL STRUCTURE OF PHENOLIC RESINS
Introduction, X-Ray Examination, Electron Microscope Examination, The Isogel Theory of Phenoplast Structure, The Spherocolloid Theory of Phenoplast Structure, Further Swelling Experiments, Development of Structure in A-Stage Resin, General Picture of Phenoplast Structure, Structure of Cast Phenoplasts

8. RESIN PRODUCTION

9. FILLERS FOR PHENOLIC RESIN MOULDING POWDERS
Types of Filler, Effect of Filler on Impact Strength and Damping, Microscopic Structure of Fillers, Ratio of Resin to Filler, Standard Classification of Phenoplast Molding Powder According to Filler, Properties of Individual Fillers, Cellulose Derivatives, Wood Flour, Walnut-Shell Flour, Cottonseed Hulls, Cellulosic Fibers, Textile By-Products, Proteinaceous Fillers, Carbon Fillers, Mineral Fillers

10. FILLERS AND RESINS FOR LAMINATES

Classification of Laminates, Laminated Phenolic Sheets, Laminated Phenolic Tubes (NEMA Classi-fication), High Strength Paper Laminates, Plastic Bonded Cotton Fiber, Glass Fabric Filler, Resins used for Laminates

11 PHYSIOLOGY AND ENVIRONMENTAL PROTECTION

Toxicology of Phenols, Toxicology of Formaldehyde, Environmental Protection, Waste Water and Exhaust Air Treatment Processes, Microbial Transformation and Degradation, Chemical Oxidation and Resinification Reactions, Thermal and Catalytic Incineration, Extraction Processes and Recovering, Activated Carbon Process, Gas Scrubbing Processes

12. DEGRADATION OF PHENOLIC RESINS BY HEAT, OXYGEN AND HIGH ENERGY RADIATION

Thermal Degradation, Oxidation Reactions, Degradation by High Energy Radiation

13. MECHANICAL PROPERTIES OF MOLDED PHENOLIC RESINS

Introduction, Mechanical Properties Covered, Pheno-plast Properties at Room Temperature, Effect of Degree of Cure on Physical Properties, Tensile Strength, Modulus of Elasticity, Compressive Strength, Flexural Strength, Shear Strength, Bearing Strength, Impact Resistance, Creep and Stress Endurance, Fatigue Resistance, Influence of Temperature on Mechanical Properties, Influence of Temperature on Creep, Theoretical Discussion of Strength Properties of Phenoplasts, Strength-Weight Comparisons with Metals

14. MECHANICAL PROPERTIES OF LAMINATED PHENOLIC RESINS

Introduction, Mechanical Properties at Ordinary Temperatures, Tensile Strength, Modulus of Elasticity, Compressive Strength, Flexural Strength, Shear Strength, Bearing Strength, Impact Resistance, Creep and Stress Endurance, Fatigue Resistance, Abrasion Resistance, Influence of Temperature on Mechanical Properties, Effect of Resin Content on Mechanical Properties, Effect of Moisture Content of Paper Filler Before Lamination, Effect of Laminating Pressure, Effect of Degree of Cure, Effect of Moisture Content on Physical Properties, Mechanical Properties of Post-Formed Laminates, Tensile Strength, Flexural Strength, Shear Strength, Impact Strength, Water Absorption

15. MODIFIED AND THERMAL-RESISTANT RESINS

Etherification Reactions, Esterification Reaction, Boron-Modified Resins, Silicon-Modified Resins, Phosphorus-Modified Resins, Heavy Metal-Modified Resins, Nitrogen-Modified Resins, Sulfur-Modified Resins

16. COMPOSITE WOOD MATERIALS

Wood, Residues of Annual Plants, Adhesives and Wood Gluing, Phenol Resins, Urea and Melamine Resins, Diisocyanates, Lignosulfonates, Bark Extracts, Physical Properties of Composite Wood Materials, Particle Boards, Wood Chips, Resins and Additives, Wood Chips, Resins, Hydrophobic Agents, Fungicides and Insecticides, Flame Retardants, Production of Particle Boards, Chip Blending, Pressing of Particle Boards, Properties of Particle Boards, Plywood, Resins, Additives and Formulations, Production of Plywood, High-Densified Plywood, Fiber Boards, Wood Fibers, Resins and Additives, Production of Fiber Boards, Structural Wood Gluing, Resorcinol Adhesives

17. MOULDING COMPOUNDS

Standardization and Minimum Properties, Composition of Molding Powders, Resins, Fillers, Reinforcements and Additives, Wood Flour and Cellulose Fibers, Asbestos, Mineral Flour, Other Fillers and Fibers, Colorants,

Lubricants and Release Agents, Production of Molding Powders, Thermoset Flow, Manufacturing of Molded Parts, Compression Molding, Transfer Molding, Injection Molding, Selected Properties, Thermal Resistance, Shrinkage and Post-Mold Shrinkage, Thermal Expansion

18. HEAT AND SOUND INSULATION MATERIALS
Inorganic Fiber Insulating Materials, Inorganic Fibers and Fiber Production, Resins and Formulation, Properties of Fiber Mats, Phenolic Resin Foam, Resins and Additives, Blowing Agents, Surfactants, Foaming Equipment, Foam Properties, Sound Insulating Textile Fiber Mats.

19. THERMAL PROPERTIES OF PHENOLIC RESINS
Introduction, Coefficient of Expansion, Flame Resistance

20. CHEMICAL RESISTANCE OF PHENOLIC RESINS
Introduction, Water Absorption, Effect of Reagents, Chemical Applications for Phenoplasts, Resistance to Microorganisms

21. OIL SOLUBLE PHENOLIC RESINS
Introduction, Pure Oil-Soluble Phenoplasts, The Modified Phenoplasts, Reactions of the Phenoplasts with Oils

22. FRICTION MATERIALS
Friction and Wear of Thermosets, Formulation of Friction Materials, Fibers, Fillers, Resins, Manufacturing of Brake- and Clutch Linings, Impregnation Process, Wet Mix â€œDoughâ€Â• Process, Dry Mix Process

23. PHENOLIC RESINS IN RUBBERS AND ADHESIVES
Mechanisms of Rubber Vulcanization with Phenolic Resins, Thermosetting Alloy Adhesives, Vinyl-Phenolic Structural Adhesives, Nitrile-Phenolic Structural Adhesives, Phenolic Resins in Contact Adhesives, Chloroprene-Phenolic Contact Adhesives, Nitrile-Phenolic Contact Adhesives, Phenolic Resins in Pressure-Sensitive Adhesives, Rubber-Reinforcing Resins, Resorcinol-Formaldehyde Latex Systems

24. PHENOLIC ANTIOXIDANTS

25. OTHER APPLICATIONS
Carbon and Graphite Materials, Phenolics for Chemical Equipment, Phenolic Resin/Fiber Composites, Phenolic Resin Fibers, Blast Furnace Taphole Mixes, Photo-Resists, Socket Putties, Brush Putties, Tannins, Ion-Exchange-Resins, Casting Resins

26. TECHNICAL MANUFACTURE OF PHENOLIC RESINS
Resin Manufacture, Cast Resins, Resin Varnishes, Resin Compound, Molding Powder, Phenoplast Molding Laminates

27. MOULDING TECHNIQUE FOR PHENOLIC RESINS
Introduction, Compression Molding, Transfer Molding, Injection Molding, Molding Practice, Preheating

28. MISCELLANEOUS TECHNICAL APPLICATIONS OF PHENOLIC RESINS
Wood Adhesives, Bonding of Insulating Mats, Resins for Bonding Grinding Wheels, Wood Impregnation, Miscellaneous Adhesive Applications, Brake-Lining Resins, Cross Linking of Thermoplasts, War Uses of Phenoplasts.

29. FOUNDRY RESINS
Mold- and Core-Making Processes, Inorganic Binders, Organic Binders, Requirements of Foundry Sands, Shell Molding Process, Precoated "Resin Shell"Â• Sand, Shell Sand Properties, Hot-Box Process, No-Bake Process, Cold-Box Process, Ingot Mold Hot Tops

30. PHENOLIC RESIN CHEMISTRY
Resoles Chemistry
Novolacs Chemistry
Manufacturing Plant and Procedure
Properties

31. BIO-BASED PHENOLIC RESINS
Tannin

32. FLEXIBILIZATION OF PHENOLIC
Tests Performed on Unmodified Phenolic Resin
Physical-Mechanical Characteristics
IR-Tests
NMR-Tests

33. FLORAL FOAM (PHENOLIC FOAM) WITH RESIN MANUFACTURING
When Working with Floral Foams
Types of Floral Foam
Wet Foam
Liquid Foam Process
Dry Foam
Foam Ingredients
Dry Hard Foam Process
Color Foam
Products
Foam Brick
Foam Dome
Properties of Floral Foam
Manufacturing Process
Resol Resin Preparation
Floral Foam Production
Process Flow Diagram

34. LIGNIN-BASED PHENOL FORMALDEHYDE (LPF) RESINS
Lignin
Lignin Modification Techniques
Methylolation and Phenolation
Lignin Thermolysis Techniques

Pyrolysis
Hydrogenolysis
Oxidation
Hydrolysis

35. PHENOL FORMALDEHYDE RESIN
Phenol Formaldehyde Resin
PF Resole Synthesis
Properties
Physical Properties
Chemical Properties
1. Overview of PF Cure
2. Action of Heat
3. Action of Acids
4. Stability
5. Toxicity
6. Ecological Effects
7. Flammability
Applications
Manufacture of Phenol Formaldehyde Resin Using Alkaline Catalyst
Manufacture of Phenol Formaldehyde Resin Using Acid Catalyst
Process
Step: 1
Step: 2
Overall Reaction
Manufacturing Process
Technology
Pollution Potential
PF Resole Synthesis and Curing
PF Synthesis and Curing Parameters

36. ALKALINE PHENOL FORMALDEHYDE RESIN
Manufacturing Process
Material Balance
Reaction Chemistry
Process Flow Diagram

37. FURFURYL ALCOHOL PHENOL UREA FORMALDEHYDE RESIN
Manufacturing Process
Material Balance
Reaction Chemistry
Process Flow Diagram

38. PHENOL FORMALDEHYDE RESIN (SHELL SAND RESIN)
Manufacturing Process
Material Balance
Reaction Chemistry
Process Flow Diagram

39. PHENOL FORMALDEHYDE RESIN (COLD BOX RESIN)
Manufacturing Process
Material Balance
Reaction Chemistry

Process Flow Diagram
List of Equipments
List of Major Raw Materials

40. EFFLUENT TREATMENT PLANT
Description of ETP Unit
ETP Flow Diagram
Water Balance

41. STANDARDS AND LEGISLATION
Standards
British Standards Relating to Thermosets
British/European Norm Standards Relating to Thermosets
British/European/International Standards Relevant to Thermosets

42. MARKETING OF THERMOSET RESINS
Acrylics
Alkyds
Amino Resins
Bismaleimides
Epoxy
Furane
Hybrids
Phenolics
Polyimides
Unsaturated Polyester
Polyurethanes
Vinyl Esters
Transport
Environment and Recycling

43. PROCESS FLOW DIAGRAM

44. SAMPLE PLANT LAYOUT

45. MACHINERY SUPPLIERS FOR PHENOLIC RESIN
Distillation Column
Vertical & Horizontal Condenser
Chemical Storage Tank
Jacketed Reactor
Chemical Process Reactor
Stainless Steel Mixing Vessel/Mixing Tank
Fractional Distillation Column
Oil Water Separators
Chemical Storage Tank
Chemical Reactor
Reaction Vessel
Heat Exchanger
Jacketed reaction Vessel
Reaction Kettle
Blending Tank
Buffer Tank
Condenser

Boiler
Resin Kettle
Weighing Machine
Resin Storage Tank
Distillation Column
High Speed Disperser
Double Cone Blender
Jacketed Reactorsses

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