

Handbook on Textile Auxiliaries, Dyes and Dye Intermediates Technology

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Textile auxiliaries are defined as chemicals of formulated chemical products which enables a processing operation in preparation, dyeing, printing of finishing to be carried out more effectively or which is essential if a given effect is to be obtained. Certain Textile Auxiliaries are also required in order to produce special finishing effects such as wash & wear, water repellence, flame retardancy, aroma finish, anti odour, colour deepening etc. The prime consideration in the choice of Textile materials is the purpose for which they are intended, but colour has been termed the best salesman in the present scenario. The modern tendency is towards an insistence on colour which is fast to light, washing, rubbing, and bleaching; this movement makes a great demand on the science of dyeing. Auxiliaries, dyes and dye intermediates play a vital role in textile processing industries. The manufacture and use of dyes is an important part of modern technology. Because of the variety of materials that must be dyed in a complete spectrum of hues, manufacturer now offer many hundreds of distinctly different dyes. The major uses of dyes are in coloration of textile fibers and paper. The substrates can be grouped into two major classes-hydrophobic and hydrophilic. Hydrophilic substances such as cotton, wool, silk, and paper are readily swollen by water making access of the dye to substrate relatively easy. On other hand hydrophobic fibers, synthetic polyesters, acrylics, polyamides and polyolefin fibers are not readily swollen by water hence, higher application temperatures and smaller molecules are generally required. Dye, are classified according to the application method. Some of the examples of dyes are acid dyes, basic or cationic dyes, direct dyes, sulfur dyes, vat dyes, reactive dyes, mordant dyes etc. Colorants and auxiliaries will remain the biggest product segment, while faster gains will be seen in finishing chemicals. World demand for dyes and organic pigments is forecast to increase 3.9 percent per year through 2013, in line with real gains in manufacturing activity. Volume demand will grow 3.5 percent annually. While the textile industry will remain the largest consumer of dyes and organic pigments, faster growth is expected in other markets such as printing inks, paint and coatings, and plastics. Market value will benefit from consumer preferences for environmentally friendly products, which will support consumption of high performance dyes and organic pigments.

Some of the fundamentals of the book are antimony and other inorganic compounds, halogenated flame retardants, phosphorous compounds, dyes and dye intermediates, textile fibers, pigment dyeing and printing, dry cleaning agents, dry cleaning detergents, acrylic ester resins, alginic acid, polyvinyl chloride, sodium carboxy methyl cellulose, guar gum, industries using guar gum, gum tragacanth, hydroxyethyl cellulose, polyethylene glycol, industries using polyethylene glycols, etc.

The book covers details of antimony and other inorganic compounds, halogenated flame retardants, silicone oils, solvents, dyes and dye intermediates, dry cleaning agents, different types of gums used in textile industries, starch, flame retardants for textile and many more. This is very resourceful book for new entrepreneurs, technologists, research scholars and technical institutions related to textile.

Contents

1. Antimony and Other Inorganic Compounds
 - Antimony Compounds
 - Boron Compounds
 - Alumina Hydrates
 - Molybdenum Oxides
 - Applications
 2. Halogenated Flame Retardants
 - Principles of Developing Flame-Retardant Polymers
 - Testing
 - Polymer Classes
 - Additive Flame Retardants
 - Reactive Flame Retardants
 - Economic Aspects
 3. Phosphorous Compounds
 - Mechanism of Action of Phosphorus Flame Retardants
 - Phosphorus-Based Flame Retardants in Commercial Use
 - Health and Safety Factors
 - Economic Aspects
 4. Urea-Formaldehyde Resins
 - Composition Variables
 - Melamine
 5. Melamine-Formaldehyde Resins
 - New Nitrogen Compounds for Amino Resins
 6. High Styrene-butadiene Rubber Resins
 7. Chlorinated Biphenyls
 8. Chlorinated Paraffins
 9. Synthetic Rubber Resin Latexes
 - Procedure
 10. Silicone Oils
 - Procedure
 11. Solvents
- TYPES OF VOLATILE SOLVENTS
12. Dyes and Dye Intermediates
 - Textile Fibers
 - Cotton and Rayon
 - Wool and Silk
 - Cellulose Acetates
 - Polyamides
 - Polyester
 - Acrylics
 - Vinyls
 - Polyolefins
 - Glass Fibers
 - Paper
- THE PROPERTIES OF DYES
- CLASSIFICATION OF DYES
- Acid dyes
 - Basic or Cationic Dyes
 - Direct Dyes
 - Sulfur Dyes

Vat Dyes
Reactive Dyes
Disperse Dyes
Mordant Dyes
Azoic Dyes
Oxidation Dyes
Ingrain Dyes
THE APPLICATION OF DYES
Fiber Preparation
Dye Bath Preparation
Dye Application
Finishing
DYEING EQUIPMENT
PRINTING
PIGMENT DYEING AND PRINTING
NONTEXTILE USES OF DYES
PRODUCTION AND USES
RAW MATERIALS FOR THE MANUFACTURE OF DYES
DYE INTERMEDIATES
Nitration
Reduction
Amination
Sulfonation
Halogenation
Alkaline Fusion
Oxidation
Other Important Reactions
PRODUCTION OF DYE INTERMEDIATES
THE MANUFACTURE OF DYES
Azo dyes
Manufacturing Processes for Azo Dyes
Triphenylmethane Dyes
Xanthene Dyes
Anthraquinone and Related Dyes
Indigoid and Thioindigoid dyes
Sulfur Dyes
Phthalocyanines
Fluorescent brightening agents
PRODUCTION STATISTICS
NEW DEVELOPMENTS IN DYES
13. Dry Cleaning Agents
Stoddard Solvent
Specification Tests
Perchloroethylene
Specification tests
Procedure
Fluorocarbon Solvent
Used Drycleaning Solvents
Drycleaning Detergents
Methods of Analysis
Specification tests
Procedure
Performance tests

Procedure

14. Acrylic Ester Resins

15. Alginic Acid

GENERAL INFORMATION

Chemical Structure

Manufacture

Physical Properties

Solution Properties

Compatibilities

Toxicology/Environment

Application Procedures

Film forming

Pie Fillings

Industrial Applications

LABORATORY TECHNIQUES

Viscosity Measurement

Moisture Determination

Powder color determination

16. Cellulose Ethers

General Information

Chemistry

Manufacture

Toxicity and Handling

Solution Properties

Thickening

Powder and Film Properties

Physical and Chemical Properties

Commercial uses: Compounding and Formulating

Adhesives

Agricultural Chemicals

Chemical Specialties

Construction Industry products

Cosmetics

Food Products

Latex paint

Paint Removers

Paper Products

Pharmaceuticals

Printing Inks

Resins

Elastomers

Textiles

Tobacco Sheet

COMMERCIAL USES: Processing Aids

Ceramics

Leather

Polyvinyl Chloride

INDUSTRIES USING ALKYL AND HYDROXYALKYLCELLULOSE

Formulations

Latex Paint

Exterior High-Solids Acrylic

Paint Remover

Scrape-off paint and varnish remover

Mixing
Flash-off Paint Remover Formulation
Construction Industry Products
Food Products
Pharmaceutical products
Tobacco
Leather
17. Sodium Carboxy Methyl Cellulose
Chemical Nature
Physical Properties
Manufacture
Biological Properties
Toxicological Properties
Rheology
Storage and Handling
Applications
18. Guar Gum
Manufacture
Chemical and Physical Properties
Biological Properties
Handling
Applications
Paper
COMMERCIAL APPLICATIONS: Compounding and Formulating
Food
Explosives
COMMERCIAL USES: Processing Aids
Oil and Gas
Textile
Mining
INDUSTRIES USING GUAR GUM
Oil and Gas
Explosives
Food
Paper
Textile
Mining
19. Gum Arabic
Chemical Nature
Physical Properties
Manufacture
Biological/Toxicological Properties
Rheological Properties
Additives/Extenders
Handling
Applications
Application Procedures
Compatibility
COMMERCIAL USES
Food Applications
Pharmaceuticals
Medicines
Cosmetics

Adhesives
Paints
Inks
Lithography
Textiles
Miscellaneous Uses
20. Gum Tragacanth
Chemical Nature
Physical Properties
Preservatives
21. Hydroxyethyl Cellulose
Chemical Nature
Physical Properties
Manufacture
Biological/Toxicological Properties
Rheological Properties of Solutions
Additives/Extenders
Handling
Applications
Application Procedures
Specialties
Future Developments
COMMERCIAL USES: Compounding and Formulating
Protective Colloid in Latex
Thickener for Latex Compositions
Cosmetics and Pharmaceuticals
Paper Sizes and Coatings
Carpet and Textile Dye Pastes
Special Applications
COMMERCIAL USES: Processing Aids
Crude-Oil Drilling and Recovery
Electroplating and Electrowinning
Miscellaneous Binders
Other Specialty Uses
INDUSTRIES USING HYDROXYETHYLCELLULOSE
Adhesives
Agricultural Products
Building Products
Cosmetics
Oil and Gas Extraction
Paints and Coatings
Paper and Allied Products
Synthetic Resins
Textile Mill Products
FORMULATIONS
Copolymer Latex
Latex Interior Flat Wall Paint
Textile Printing
Oil-Well Workover Fluid
Roll-on Antiperspirant
Liquid Shampoo
LABORATORY TECHNIQUES
PRODUCT/TRADENAME/TERM GLOSSARY

FURTHER USEFUL READING

Technical Bulletins

22. Hydroxy Propyl Cellulose

Chemical Nature

Physical Properties

Manufacture

Toxicological Properties

Additives

Handling

Applications

Application Procedures

Specialties

23. Locust Bean Gum

Manufacture

Properties

Biological Properties

Handling

COMMERCIAL USES: Compounding and Formulating

Food Products

COMMERCIAL USES: Processing Aids

Textiles Processing

Paper Products

Mining Industry

INDUSTRIES USING LOCUST BEAN GUM

Food Industry

14-14 Locust Bean Gum

Mining Industry

Paper industry

Textiles Industry

24. Polyacrylic Acid

Physical and Chemical Nature

Methods of Preparation

Polymer Reactions

COMMERCIAL APPLICATIONS

Thickening

Suspending and Dispersing

Flocculation

Binders

Coatings

Leather Paste

Ion-Exchange Processes

Pharmaceuticals

Adhesives

Miscellaneous

25. Polyethylene Glycol

Chemical Nature

Physical Properties

Biological/Toxicological Properties

Manufacture

Handling

Applications

Application Procedures

Additives/Extenders

Specialties
Future Developments
COMMERCIAL USES: Compounding and Formulating
Chemical Intermediates
Adhesives
Agricultural Formulations
Cellophane-Film Humectants
Cosmetics and Toiletries
Detergents and Cleaners
Inks
Paints and Coatings
Pharmaceutical Products
Rubber Compounds
Miscellaneous Products
COMMERCIAL USES: Processing Aids
Ceramics
Dialysis Operations
Electroplating
Heat-Transfer Baths
Leather Treatment
Metal-Working Operations
Paper Products
Petroleum Recovery and Processing
Plastics Compounding
Rubber Products
Textile Products
Wood Products
INDUSTRIES USING POLYETHYLENE GLYCOLS
Adhesive
Agricultural Products
Ceramics Products
Chemical Specialties
Cosmetics and Toiletries
Electroplating and Electrowinning
Food Products
Inks and Printing
Leather Processing
Lubricants and Hydraulic Fluids
Medical Sundries
Metal Fabricating
Packaging Materials
Paints and Coatings
Paper Products
Petroleum Recovery and Processing
Pharmaceuticals
Photographic Products
Plastics Products
Rubber and Elastomers
Textile Products
Wood Processing
26. Poly-Ethylene Oxide
Chemical Nature
Physical Properties

Manufacture
Biological/Toxicological Properties
Rheological Properties
Additives/Extenders
Applications
Application Procedures
COMMERCIAL USES: Compounding and Formulating
Adhesives
27. Polyvinyl Alcohol
Chemical Nature
Physical Properties
Manufacture
Physiological Properties
Federal Drug Administration (FDA) Status
Biochemical Oxygen Demand (BOD)
Biodegradation
Modifiers
Handling and Storage
Application Procedures
COMMERCIAL USES: Compounding and Formulating Adhesives
Paper and Paperboard Sizing
Paper and Paperboard Coatings
Pigmented Coatings
Greaseproof Coatings
Textile Finishing
Binder Applications
Cast Film
Molded Articles
Emulsions and Dispersions
Cosmetics
Chemical Derivatives
COMMERCIAL USES: Processing Aids
Textile Warp Sizing
Temporary Binder
Casting Slips
Steel Quenchant
Miscellaneous Coating Applications
Materials Stabilization
INDUSTRIES USING POLYVINYL ALCOHOL
Textile Industry
Paper Industry
Adhesives Industry
Cast-Film Industry
Building Products Industries
Packaging Industry
Chemical Industry
Cosmetics Industry
Ceramics Industry
Steel Industry
Materials Binding
FORMULATIONS
Textile Warp Sizing: Slasher Operation
Textile Warp Sizing: Size-Bath Formulas

Preparation Procedure
Adhesives
Tubes and Cores: Spiral Winding
28. Polyvinyl Pyrrolidone
Chemical Nature
Physical Properties
Manufacture
Rheological Properties
Toxicological Properties
PVP Films
Compatibilities
Future Developments
APPLICATIONS OF PVP
29. Starch
GENERAL INFORMATION
Structure and Properties
Starch Supplies
Manufacture of Starch
Starch Modifications
Applications of Starches
30. Tamarind Gum
Chemical Nature
Physical Properties
Manufacture
Biological/Toxicological Properties
Electrochemical Properties
Rheological Properties
Additives/Extenders
Handling
Applications
By Result
Application Procedures
Future Developments
COMMERCIAL USES
Processing Aids
INDUSTRIES USING TAMARIND GUM
FORMULATIONS
Latex Manufacture
Other Uses
LABORATORY PROCEDURES
Viscosity Method
31. Xanthan Gum
GENERAL INFORMATION
Chemical Structure
Physical Properties
Solution Properties
Suspensions
Emulsions
Dispersions
Application Procedures
Handling and Storage
Reaction with Galactomannans
Toxicology and Safety

COMMERCIAL USES: Food
Xanthan Gum
Xanthan Gum with Locust Bean Gum
COMMERCIAL USES: Industrial
Xanthan Gum
Xanthan Gum with Locust Bean Gum
32. Flame Retardants for Textiles
Flame Resistance
Durability
Test Methods
Types of Retardants
Application Techniques
Fire-Retardant Fiber Blends
Mutagenicity

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