

Logo

106-E, Kamla Nagar, New Delhi-110007, India.
Tel: 91-11-23843955, 23845654, 23845886, +918800733955
Mobile: +91-9811043595
Email: npcs.ei@gmail.com, info@entrepreneurindia.co
Website: www.entrepreneurIndia.co

Handbook on Textile Auxiliaries, Dyes and Dye Intermediates Technology

Code: NI221	Format: paperback
Indian Price: ₹1575	US Price: \$150
Pages: 736	ISBN: 9788178331225
Publisher: Asia Pacific Business Press Inc.	

Description

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.

Content

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

About NIIR Project Consultancy Services (NPCS)

NIIR Project Consultancy Services (NPCS) is a reliable name in the industrial world for offering integrated technical consultancy services. Its various services are: Pre-feasibility study, New Project Identification, Project Feasibility and Market Study, Identification of Profitable Industrial Project Opportunities, Preparation of Project Profiles and Pre-Investment and Pre-Feasibility Studies, Market Surveys and Studies, Preparation of Techno-Economic Feasibility Reports, Identification and Selection of Plant and Machinery, Manufacturing Process and/or Equipment required, General

Guidance, Technical and Commercial Counseling for setting up new industrial projects and industry. NPCS also publishes various technology books, directories, databases, detailed project reports, market survey reports on various industries and profit making business. Besides being used by manufacturers, industrialists, and entrepreneurs, our publications are also used by Indian and overseas professionals including project engineers, information services bureaus, consultants and consultancy firms as one of the inputs in their research.

NIIR PROJECT CONSULTANCY SERVICES

106-E, Kamla Nagar, New Delhi-110007, India.

Tel: 91-11-23843955, 23845654, 23845886, +918800733955

Mobile: +91-9811043595

Email: npcs.ei@gmail.com, info@entrepreneurindia.co

Website: www.entrepreneurIndia.co