

## Astm D1424

This major textbook is designed for students studying textiles and fashion at higher and undergraduate level, as well as those needing a comprehensive and authoritative overview of textile materials and processes. The first part of the book reviews the main types of natural and synthetic fibres and their properties. Part two provides a systematic review of the key processes involved first in converting fibres into yarns and then transforming yarns into fabrics. Part three discusses the range of range of finishing techniques for fabrics. The final part of the book looks specifically at the transformation of fabric into apparel, from design and manufacture to marketing. With contributions from leading experts in their fields, this major book provides the definitive one-volume guide to textile manufacture. Provides comprehensive coverage of the types and properties of textile fibres to yarn and fabric manufacture, fabric finishing, apparel production and fashion Focused on the needs of college and undergraduate students studying textiles or fashion courses Each chapter ends with a summary to emphasise key points, a comprehensive self-review section, and project ideas are also provided

This book highlights the impact of COVID-19 on sustainable waste management and air emission, using various case studies. The year 2020 was a historical year mainly due to the pandemic caused by COVID-19 and it influenced or affected the global economy, business models and the industrial sectors, thus impacting sustainability in various ways. Given that sustainability has many faces and facets, it is worthwhile to deal with the relation (or impact) of COVID-19 on various elements of sustainability. This book presents how COVID-19 has influenced waste management and air quality.

This book reviews the manufacturing processes of different shopping bags used for grocery purposes, life cycle impacts, modelling of life cycle impacts, carbon and eco-footprints in different countries, consumption of shopping bags in different countries, consumer behaviour of shopping bags in various countries and its relation to eco-impact, assessment of functionality of shopping bags, concept and framework of eco-functional assessment of shopping bags, biodegradation of shopping bags, etc.

As consumer demands for specific attributes in their textiles increase and global competition intensifies, it is important that the industry finds ways of engineering certain performance requirements into textiles and apparel. This book reviews how fabrics and garments can be engineered to meet technical performance and other characteristics required for the specific end-use. Chapters begin with fabric and garment handle and making – up performance, followed by wear appearance issues, such as wrinkling, pilling and bagging. Further chapters include fabric and garment drape, durability related issues, as well as physiological and psychological comfort. Key topics of fire retardancy, waterproofing, breathability and ultraviolet protection are also discussed. Written by two highly distinguished

authors, this is an invaluable book for a wide range of readers in the textile and apparel industries, ranging from textile and garment manufacturers, designers, researchers, developers to buyers. Reviews the engineering of fabrics to meet technical performance requirements for specific end-use Chapters examine various wear appearance issues such as wrinkling, bagging and fabric and garment drape Discusses durability related issues including fire retardancy and waterproofing as well as psychological and physiological fabric comfort The ability of a fabric to resist wear is an essential aspect of its performance. Understanding and improving the durability of textiles provides a comprehensive guide to the factors affecting the durability of a range of different textiles. Part one addresses the different factors that affect textile durability, including the influence of fabric construction and fibre type, as well as properties affecting strength and dimensional stability. Colour fastness and the effects of light are discussed, along with methods for testing and improving wrinkle-resistance and textile durability. Part two goes on to explore the durability of particular types of textile including antimicrobial textiles, protective clothing, historic textiles, silk and geotextiles. With its distinguished editor and international team of expert contributors, Understanding and improving the durability of textiles is an indispensable book for textile scientists, technologists, engineers and those designing, testing and manufacturing textiles. It also provides a comprehensive guide to textile durability for researchers and academics of all levels in this sector. Provides a comprehensive guide to the factors affecting the durability of a range of different textiles Discusses colour fastness and the effects of light, and methods for testing and improving wrinkle-resistance and textile durability Explores the durability of particular types of textile

This textbook addresses the pathway to reach sustainability in fashion business and apparel sectors. This book contains various research papers originally contributed by different authors from various organizations who are all working towards the eco-friendly manufacturing of apparel products. This textbook provides approaches, techniques, alternative procedures/sustainable routes to develop sustainable apparel in a more environmentally friendly manner for the future. The research papers discussed in this book mainly focus on the various challenges put forth by the apparel industry with respect to environmentally friendly product manufacturing and also provides solutions to achieve the same through different principles and approaches which fulfil the production, user and disposal ecological considerations. The book will be really useful for academicians, industry personnel and to textile and apparel students and scholars who wish to explore their knowledge and innovations in the field of sustainable apparel product manufacturing and processes.

The Handbook of Natural Fibres: Volume Two, Processing and Applications, Second Edition provides detailed coverage of the latest processing techniques and industrial applications of a wide range of natural fibers. Natural fibrous resources, both lignocellulosic and protein ones, are renewable, biodegradable, and nontoxic, making them an important source of sustainable

textile solutions. A broad range of sources of natural fibers are covered in the book, including flax, hemp, bast, jute, coir, linen, cotton and silk. This wealth of expert information provides a uniquely detailed reference for the processing, characterization, selection and application of natural fibers. Connects natural fibers to a wide range of industries, including construction, automotive, packaging and medical Helps readers appraise natural fibers on the basis of their mechanical, electrokinetic, antimicrobial or flame retardant qualities Provides a rare glimpse of emerging manufacturing methods for silk

In today's climate there is an increasing requirement for protective textiles, whether for personal protection, protection against the elements, chemical, nuclear or ballistic attack. This comprehensive book brings together the leading protective textiles experts from around the world. It covers a wide variety of themes from materials and design, through protection against specific hazards, to specific applications. This is the first book of its kind to give a complete coverage of textiles for protection. Covers a wide variety of themes from materials and design, through protection against specific hazards, to specific applications The first book of its kind to give a complete coverage of textiles for protection Written by leading protective textiles experts from around the world

The Handbook of Electronics Packaging Design and Engineering has been written as a reference source for use in the packaging design of electronics equipment. It is designed to provide a single convenient source for the solution of recurring design problems. The primary consideration of any design is that the end product meet or exceed the applicable product specifications. The judicious use of uniform design practices will realize the following economies and equipment improvements:

- Economics of design. Uniform design practices will result in less engineering and design times and lower costs. They will also reduce the number of changes that may be required due to poor reliability, maintainability, or producibility.
- Improved design. Better designs with increased reliability, maintainability, and producibility will result from the use of uniform design practices.
- Production economies. Uniform designs employing standard available tools, materials, and parts will result in the cost control of manufacturing.

The Handbook is intended primarily for the serious student of electronics packaging and for those engineers and designers actively engaged in this vital and interesting profession. It attempts to present electronics packaging as it is today. It can be used as a training text for instructional purposes and as a reference source for the practicing designer and engineer.

Koerner's Third Edition keeps pace with the fast-moving field of geosynthetics by updating coverage to include the latest materials and design techniques. It examines all types of geosynthetics-geotextiles, geogrids, geonets, geomembrane, and geocomposites with an emphasis on design-by-function.

Geomembranes are flexible polymeric sheets which are used as relatively impermeable liners to contain liquid and vapour. With uses ranging from canal liners to hazard waste landfills, they are used extensively in a range of industries such as water conservation, mining, construction and waste management. A Guide to Polymeric Geomembranes: A Practical Approach offers an informed overview of the developments in this field and includes: Detailed discussion of the major geomembrane types Manufacturing methods Key performance properties Industrial applications Testing and chemical resistance of geomembranes Failure analysis methodology Written by a polymer research specialist with more than fifteen years experience in industry, this practical handbook covers the manufacture, use, installation, durability, lifespan and performance of geomembranes. It covers all the information required to enable the reader to select the most suitable geomembrane material for the job. This book is a useful reference for engineers and professionals in industry, environmental consultants, polymer and materials scientists, and government agencies and policy makers. It is of particular interest to those designing, commissioning and operating waste management sites, landfills, mine leachate

ponds and water containment facilities.

The textile industry is becoming an increasingly competitive environment. Differentiating products by quality is particularly important. Testing can be performed both to improve product quality and achieve compliance to international, regional or retailer specific standards. Fabric testing provides a comprehensive review of the tests available for fabrics. The book begins with introductory chapters which discuss the scope, importance and statistical analysis of fabric testing. The book then reviews various types of fabric tests such as fabric composition testing, physical and mechanical tests, fabric chemical testing, how to test appearance, permeability, comfort and flammability, as well as dyeing and colouring tests and key issues in testing textile samples. With its distinguished editor and international team of contributors Fabric testing is a valuable resource for designers, technologists, quality inspectors and testing institutes in the textile industry. It is also relevant for academics and students within the textile field. Reviews various types of fabric tests including fabric composition and fabric chemical testing Discusses the scope, significance and statistical analysis of fabric testing Assesses the importance of fabric testing to both product quality and industry standard compliance

Coating and laminating are methods of both improving and modifying the physical properties and appearance of fabric. They have also facilitated the development of entirely new products and have led to innovations in the area of 'smart' materials. Coating and lamination cuts across virtually every product group of the textile industry, including composites where the scope for future development is extremely wide. This book helps bridge the gap between the two disciplines of textile technology and polymer chemistry, both of which are necessary for success in this area of technical textiles, and it also touches on the related textile processes of fabric impregnation and foam finishing. The manufacturing processes of coated and laminated fabrics involve materials such as solvent- and water-based resins and adhesives, films, foams and hot melt adhesives. In an increasingly environmentally-conscious world, control and handling of potentially toxic materials are becoming very important tasks for plant managers. The author emphasises the factors influencing selection of materials and process machinery -- especially with reference to environmental issues including global warming. Product descriptions, production and test methods and standards are discussed in detail, and the book will be a valuable source of reference, embracing apparel, domestic, medical, military and industrial applications.

Commerce Business Daily Assessment of Environmental Impact by Grocery Shopping Bags An Eco-Functional Approach Springer Science & Business Media

This user-friendly guide to evaluating apparel quality presents the roles of product designers, manufacturers, merchandisers, testing laboratories, and retailers from product inception through the sale of goods, to ensure quality products that meet customer expectations. Bubonia provides an overview of apparel production, with emphasis on quality characteristics and cues, consumer influences and motivations impacting purchasing decisions, and the relationship of apparel manufacturing and production processes, cost, price point and the quality level of an apparel product. A key aspect of the book is the focus on both U.S. and International standards and regulations required for apparel analysis, performance, labeling requirements and safety regulations. The text is highly illustrated with images of stitch and seam types plus photos of their uses in actual garments, providing students with the tools needed to skillfully evaluate and critique quality elements in apparel and textile products. Key Features ~ Supplementary Apparel Quality Lab Manual (sold separately) includes

hands-on lab activities and projects that simulate real-world garment analysis and material testing ~ Industry Scenario boxes present case studies highlight real world situations such as the Lululemon recall and the environmental impact of apparel manufacturing ~ Provides an illustrated guide to ASTM stitch and seam types Teaching Resources ~ Instructor's Guide with Test Bank ~ PowerPoint presentations for each chapter PLEASE NOTE: Purchasing or renting this ISBN does not include access to the STUDIO resources that accompany this text. To receive free access to the STUDIO content with new copies of this book, please refer to the book + STUDIO access card bundle ISBN 9781501395338. STUDIO Instant Access can also be purchased or rented separately on BloomsburyFashionCentral.com.

This book provides an overview of the types of fibres used in home textiles and the key issues relating to product development, industry standards, regulatory aspects, and evaluation systems. An understanding of these topics can assist the designer or manufacturer in developing product performance and quality in line with the value addition and to maintain the basic concept underlying in green consumerism. The books emphasis is on how to achieve the commercial success of the desired end product through knowledge of the key markets producing various home textiles, scope of development through sustainable and eco-friendly fibres, evaluation systems and above all safety aspects and environmental regulations.

Following the structure of previous editions, Volume 2 of this Sixth Edition proceeds through four individual chapters on geomembranes, geosynthetic clay liners, geofabric and geocomposites. The two volumes must accompany one another. Volume 1 contains geosynthetics, geotextiles, geogrids and geonets. The two volumes must accompany one another. All are polymeric materials used for myriad applications in geotechnical, geoenvironmental, transportation, hydraulic and private development applications. The technology has become a worldwide enterprise with approximate \$5B material sales in the 35-years since first being introduced. In addition to describing and illustrating the various materials; the most important test methods and design examples are included as pertains to specific application areas. This latest edition differs from previous ones in that sustainability is addressed throughout, new material variations are presented, new applications are included and references are updated accordingly. Each chapter includes problems for which a solutions manual is available.

Woven Terry Fabrics: Manufacturing and Quality Management encompasses all aspects of terry fabric production, from raw material choice and weave design to technological developments, dyeing, and quality evaluation. Nothing feels more luxurious and comforting than wrapping myself or one of my children in a thick, soft, fluffy towel after bathing says Lindsey, a healthcare administrator and mother of two children in Boston. Consumers pay an average 15 USD for a bath towel. So, it has become a luxury item today. To meet the demand of growing population, the terry fabric industry has grown to a large extent. Lots of technological developments have taken place in this field. Provides an excellent overview of the best production methods, quality control systems, latest research, and process parameters Offers in-depth information on all aspects of production Covers comprehensively, for the first time, the whole process from raw material through to finished fabric Includes coverage of technological developments

Gain a stronger foundation with optimal ground improvement Before you break ground

on a new structure, you need to analyze the structure of the ground. Expert analysis and optimization of the geo-materials on your site can mean the difference between a lasting structure and a school in a sinkhole. Sometimes problematic geology is expected because of the location, but other times it's only unearthed once construction has begun. You need to be able to quickly adapt your project plan to include an improvement to unfavorable ground before the project can safely continue. Principles and Practice of Ground Improvement is the only comprehensive, up-to-date compendium of solutions to this critical aspect of civil engineering. Dr. Jie Han, registered Professional Engineer and preeminent voice in geotechnical engineering, is the ultimate guide to the methods and best practices of ground improvement. Han walks you through various ground improvement solutions and provides theoretical and practical advice for determining which technique fits each situation. Follow examples to find solutions to complex problems Complete homework problems to tackle issues that present themselves in the field Study design procedures for each technique to simplify field implementation Brush up on modern ground improvement technologies to keep abreast of all available options Principles and Practice of Ground Improvement can be used as a textbook, and includes Powerpoint slides for instructors. It's also a handy field reference for contractors and installers who actually implement plans. There are many ground improvement solutions out there, but there is no single right answer to every situation. Principles and Practice of Ground Improvement will give you the information you need to analyze the problem, then design and implement the best possible solution.

Due to their unique properties and ability to interact with other food components, biopolymers have traditionally played a major role in food processing. Biopolymer Engineering in Food Processing explores processing technology associated with biopolymer applications and discusses both operational and economic aspects. Following an overview of biopol

This guide deals with the dynamics of the global textiles and clothing supply chain, including the need for garment manufacturers to develop alternative sourcing and supply management approaches. The publication reviews historical background; discusses China's advantage in the international garment industry; explains different stages involved in material sourcing process; and discusses politics of trade. It also includes case studies; summary of United States rules of origin; measures and conversions, and a glossary of shipping and related terms.

Textile structure and mechanics are fundamental to the way textiles are designed, manufactured, tested and used. Structure and mechanics of textile fibre assemblies discusses aspects of fabric structure and mechanical properties such as tensile, bending and shear properties for a range of fabrics. After a general introduction illustrating the role of fabric structure and mechanics, subsequent chapters discuss the structural, tensile, bending and shear properties of woven, knitted and nonwoven fabrics. Other chapters review the structure and mechanics of yarns, coated fabrics, 2D and 3D textile composites. Testing methods for the measurement of fabric mechanical properties and structure parameters are also explored. With its renowned editor and contributions from some of the world's leading authorities, Structure and mechanics of textile fibre assemblies is an important reference for textile scientists, technologists, engineers and those designing and manufacturing textiles. It will also be suitable for

those within the academic sector. Examines aspects of fabric structure and mechanical properties for a range of fabrics Discusses structure and mechanics of yarn and woven, nonwoven and knitted fabrics Explores testing methods enabling the measurement of fabric mechanical properties and structural parameters

This student lab manual reinforces the chapter content and lecture material from Apparel Quality, but may also be used as a standalone product in conjunction with another apparel quality textbook. With more than 30 hands-on lab activities and projects to enhance learning, the lab manual offers a greater understanding of quality issues that arise with apparel production and end use. Designed for courses that emphasize textile testing or offer a laboratory component, Apparel Quality Lab Manual includes supply lists; extensive reference tables; assignments for analyzing products, testing and evaluating materials and garments; project sheets for product comparison testing; worksheets to record data; directions for mounting specimens after testing; and templates for cutting specimens. Students will be actively engaged in their learning and participate in determining the quality level of apparel products, allowing them to simulate how apparel products are analyzed in the industry.

Edited by a leading expert in the field with contributions from experienced researchers in fibers and textiles, this handbook reviews the current state of fibrous materials and provides a broad overview of their use in research and development. Volume One focuses on the classes of fibers, their production and characterization, while the second volume concentrates on their applications, including emerging ones in the areas of energy, environmental science and healthcare. Unparalleled knowledge of high relevance to academia and industry.

This comprehensive text on apparel product development reflects the current importance of manufacturers' and retailers' private brands and exclusive designer collections.

Systematic treatment of difficult ground as a separate paper in undergraduate and postgraduate courses is gaining ground in Indian universities. Earlier, these topics were taught under a variety of subjects like Advanced Geotechnical Engineering, Retaining Structures, Dams, Pavement Designs, Application of Geosynthetics, Application of Soil Mechanics, and so on. However, field requirement and advances in the technology make a strong case for a focused treatment of the subject which this book provides. A full-fledged paper in ground improvement techniques concentrates on the topics of soil stabilization, compaction, preloading, vertical drains, geosynthetics, in-situ reinforcements and modelling of soil reinforcement. The book provides an overview of the basic concepts of ground modifications to difficult soils in a logical and illustrative way. It teaches how to apply alternative solutions to difficult foundation problems and evaluate their effectiveness before and after construction. The text is supported by a large number of examples, review and multiple choice questions, as well as practical problems. The book is intended to serve as a textbook for undergraduate and postgraduate students of Geotechnical, Transportation, Hydraulic and Environmental Engineering, and a reference work for practising civil engineers. Salient features 1. A well researched textbook on ground improvement techniques 2. Conforms to the syllabi of all Indian universities where the subject is taught 3. Written by an expert on the subject with a decade of teaching experience

Rev. ed. of: Physical testing of rubbers. c1979.

The role of the textile finisher has become increasingly demanding, and now requires a careful balance between the compatibility of different finishing products and treatments and the application processes used to provide textiles with desirable properties. In one comprehensive book, Chemical finishing of textiles details the fundamentals of final chemical finishing, covering the range of effects that result from the interplay between chemical structures and finishing products. After an introductory chapter covering the importance of chemical finishing, the following chapters focus on particular finishing techniques, from softening, easy-care and permanent press, non-slip and soil-release, to flame-retardant, antistatic and antimicrobial. Within each chapter, sections include an introduction, mechanisms, chemistries, applications, evaluations and troubleshooting. The book concludes with a chapter on the future trends in chemical finishing. Chemical finishing of textiles is an essential reference for all academic and industrial textile chemists and for those studying textile education programmes. Discusses the advantages and disadvantages of every important type of chemical finish Combines technical understanding and practical experience concisely Essential tool to assist in the demanding challenge of chemical finishing for textiles

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