

Iso 527 Plastics Determination Of Tensile Properties Zwick

Fiber composites, like metals, exhibit a form of degradation in service described as fatigue. Engineers must understand composite fatigue because it is a causative agent of design and structural failures. Engineers need to increase their knowledge of the mechanisms which result in degradation in order to predict the life of a composite under specified conditions and produce composites with greater durability. This book provides an extensive account of contemporary research on fatigue from a selection of internationally recognized researchers. Part one introduces the concept, delivering a historical review of the fatigue behavior of fiber-reinforced plastics and illustrating fatigue test methods and fatigue under multiaxial stress systems. The second part reviews current research on micromechanical aspects, emphasizing long-term behavior, interface performance, delamination, and damage accumulation. The next two sections cover the analysis and testing of fatigue behavior and detail physical, micromechanical, computational, statistical, and life-prediction models for constant and variable stress. The final parts offer an overview of the wide range of composite fatigue-related problems experienced by engineers in aerospace, marine, and structural engineering.

The Effect of UV Light and Weather on Plastics and Elastomers, Fourth Edition, provides critical data on the effect of UV light and weathering on plastics and elastomers, enabling engineers, designers and R&D professionals to select the right materials when developing plastics products for a range of industries and applications. This information will also support academic researchers and scientists in developing polymeric materials for advanced applications. Provides vital data on the effects of weather and UV light exposure on plastics and elastomers Offers practical guidance for engineers and scientists working with plastics for outdoor applications Expanded revision includes the latest data, polymer classes and newly available materials, including bio-based polymers and plastics for 3D printing

Brydson's Plastics Materials, Eighth Edition, provides a comprehensive overview of the commercially available plastics materials that bridge the gap between theory and practice. The book enables scientists to understand the commercial implications of their work and provides engineers with essential theory. Since the previous edition, many developments have taken place in plastics materials, such as the growth in the commercial use of sustainable bioplastics, so this book brings the user fully up-to-date with the latest materials, references, units, and figures that have all been thoroughly updated. The book remains the authoritative resource for engineers, suppliers, researchers, materials scientists, and academics in the field of polymers, including current best practice, processing, and material selection information and health and safety guidance, along with discussions of sustainability and the commercial importance of various plastics and additives, including nanofillers and graphene as property modifiers. With a 50 year history as the principal reference in the field of plastics material, and fully updated by an expert team of polymer scientists and engineers, this book is essential reading for researchers and practitioners in this field. Presents a one-stop-shop for easily accessible information on plastics materials, now updated to include the latest biopolymers, high temperature engineering plastics, thermoplastic elastomers, and more Includes thoroughly revised and reorganised material as contributed by an expert team who make the book relevant to all plastics engineers, materials scientists, and students of polymers Includes the latest guidance on health, safety, and sustainability, including materials safety data sheets, local regulations, and a discussion of recycling issues The American Society for Testing and Materials published the first test standard for plastics in 1937. These 21 papers presented at an ASTM symposium held in November 1998, while demonstrating how sophisticated test standards have become, also address their limitations. Papers are organized by the m

Composites - A Profile of the World-wide Reinforced Plastics Industry, Markets and Suppliers to 2005

On the Time and Temperature Dependent Behaviour of Laminated Amorphous Polymers Subjected to Low-Velocity Impact

Technologies - Methods - Materials - Properties

Plastics: Determination of Tensile Properties

Test Conditions for Isotropic and Orthotropic Fibre-reinforced Plastic Composites (ISO 527-4 : 1997, IDT)

Mechanical Testing of Advanced Fibre Composites

The Handbook of Polymer Testing: Physical Methods provides virtually currently used techniques for measuring and testing the physical properties of polymers. A concise but

detailed technical guide to the physical testing methods of synthetic polymers in plastics, rubbers, cellular materials, textiles, coated fabrics, and composites, the book analyses a wide array of physical parameters and features complete coverage of mechanical, optical, and electrical, and thermal properties. Topics of interest include sample preparation, time-dependent properties, coated fabrics, weathering, permeability, and nondestructive testing.

[After payment, write to & get a FREE-of-charge, unprotected true-PDF from: Sales@ChineseStandard.net] This Part of GB/T 2546 specifies the methods of preparation of test specimens and the test methods to be used in determining the properties of polypropylene (PP) moulding and extrusion materials. Requirements for handling test material and for conditioning both the test material before moulding and the specimens before testing are given here. This Part also specifies the methods and conditions for specimen preparation and properties determination. This Part lists the properties and test methods which are suitable and necessary to characterize PP moulding and extrusion materials.

BS EN ISO 527-4. Plastics. Determination of Tensile Properties Part 4. Test conditions for isotropic and orthotropic fibre-reinforced plastic composites
Plastics Determination of Tensile Properties. General principles. Part 1

The thesis investigates a polymeric laminate consisting of poly(methyl methacrylate) (PMMA) and thermoplastic polyurethane (TPU) experimentally and numerically with regard to its impact behaviour and applicability. After a basic characterization of the monolithic materials, PMMA-TPU-PMMA laminates were subjected to impact loadings at velocities up to 5 m/s using threepoint bending and dart impact tests. Based on the experimental basis, different material models for the Finite Element simulation are presented, which are able to capture the time and temperature dependent behaviour of the laminate. Final validation experiments, consisting of head-dummy impacts at 10 m/s on automotive side windows, were conducted for PMMA and the laminate in order to investigate their applicability as glass substitution products.

Part 4. Test conditions for isotropic and orthotropic fibre-reinforced plastic composites
Characterisation and Modelling of Continuous-Discontinuous Sheet Moulding Compound Composites for Structural Applications

Limitations of Test Methods for Plastics

Plastics - Determination of Tensile Properties - Part 3

PN-EN ISO 527-1

Special edition of the Federal register, containing a codification of documents of general applicability and future effect as of ... with ancillaries.

Infrastructure is currently one of the most significant markets for composite materials and is expected to become even more significant to the composites industry as the sector increases its acceptance of fibre and carbon reinforced plastics. This new report, from the publisher of Reinforced Plastics magazine, examines the main infrastructure market sectors per region, providing market forecasts for all significant applications worldwide. For a PDF version of the report please call Tina Enright on +44 (0) 1865 843008 for price details. Exhaustive, authoritative and comprehensive, using 160 statistical tables, this book addresses the fundamental structure of materials and remediation, and looks at the properties of water and water-induced degradation and deterioration, with chapters on moisture effects in buildings and materials, corrosion theory and metal protection. The authors explain the behaviour of materials in fires, fundamental fire resistance principles and techniques, calculation of flame temperatures, and the removal of heat by nitrogen and other combustion products. It addresses properties performance, degradation of masonry, plastics, adhesives, sealants, timber, glass and fibre composites, metals and alloy elements. Phase diagrams show cooling curves and structure for metals and alloys. Concrete technology is developed in relation to degradation, electro-potential mapping and cathodic protection of reinforced concrete. The book is fully updated to current British and European standards. Addresses the fundamental structure of materials and remediation and looks at the properties of water and water-induced degradation and deterioration Explains the behaviour of materials in fires, fundamental fire resistance principles and techniques, calculation of flame temperatures and the removal of heat Fully updated to current British and European standards

When combined with reinforcing agents, plastics can be used for a number of high-temperature applications. **Plastics Reinforcement and Industrial Applications** provides a detailed discussion on plastics, polymers, and reinforcing agents (including organic and natural biomaterials). Focused specifically on improving the mechanical, thermal, and electrical stability of plastics by combining them with reinforcing agents, this book explains the background of reinforced plastics and describes how they work. The book examines reinforcing agents that include glass fibers, carbon fibers, carbon nanotubes, graphite, talc, and minerals, and commonly used plastics such as polyamides, polyesters, polyethylene terephthalate, and epoxy resins. It also introduces newer plastics such as polyimides, polysulfones, polyethersulfone, polyphenylene sulfide, and polyether ether ketones. It highlights recent developments in the field that include the use of nanocomposites for manufacturing sports equipment, and other applications of nanoparticles in polymer reinforcement. In addition, use of this material can aid in the production of plastics utilized in the construction of aircraft and light weight automobiles. The author covers a wide range of applications that may be applied in general engineering, automotive, aerospace, building materials, electronics and microelectronics, power sources, medical, and bioengineering. He also includes material on natural fibers used for reinforcement and green chemistry applications. Suitable for use in the metals and plastics industries, **Plastics Reinforcement and Industrial Applications** is an ideal resource for polymer and material scientists, and chemical and mechanical engineers.

Test Conditions for Films and Sheets (ISO 527 : 1995, IDT)

Adhesives in Marine Engineering

Properties, Uses, Degradation, Remediation

The Effect of Temperature and other Factors on Plastics and Elastomers

GB/T 24128-2009: Translated English of Chinese Standard (GB/T24128-2009, GBT 24128-2009)

Code of Federal Regulations

1.1 This Standard specifies the anti-mold performance test of plastic materials and their products such as tubes, rods, sheets and films. This Standard is applicable to the determination of the effects of changes in the optical, mechanical and electrical properties of plastics caused by mold growth. 1.2 This Standard does not involve relevant safety issues. Before using this Standard, the user shall formulate appropriate safety and health regulations in advance, and determine the scope of application and limitation.

The main objective of this work is to significantly deepen the understanding of the material and the structural behaviour of continuous-discontinuous SMC composites, following a holistic approach to investigate microscopic aspects, macroscopic mechanical behaviour as well as failure evolution at the coupon, structure and component level. In addition, criteria to evaluate the effect of hybridisation are introduced and modelling approaches are presented and discussed.

This book is an update to the first edition compiled and published in 1990 by William Woishnis. A lot has changed in the field since 1990 and a lot has not changed. There are new plastic materials. There has been a huge turnover in ownership of plastics producing companies. There has been a lot of consolidation, which of course means discontinued products. Thus, this update is much more extensive than the usual "next edition." It has been reorganized from a chemistry point of view. Plastics of similar polymer types are grouped into nine chapters. Each of these chapters includes an introduction with a brief explanation of the chemistry of the polymers used in the plastics. An extensive first chapter has been added as an introduction that summarizes the chemistry of making polymers, the formulation of plastics, testing and test methods, and plastic selection. Most plastic products and parts are expected to be used in environments other than room temperature and standard humidity conditions. Chapters 2-10 are a databank that serves as an evaluation of plastics as they are exposed to varying operating conditions at different temperatures, humidity, and other factors. Over 900 graphs for more than 45 generic families of plastics are contained in these chapters. Chapter 11 contains extensive mechanical and electrical data in tabular form. The tables contain data on several thousand plastics. Similarly, Chapter 12 contains thermal data on several thousand plastics. Data from the first edition have only been removed if those products were discontinued, and many products were. Product names and manufacturers have been updated. • Detailed introductions of plastics properties, testing procedures, and principles of plastics design. • The only "databook" available on the effects of temperature and humidity conditions on plastics and elastomers. • More than 1,000 graphs and tables allow for easy comparison between products. • Covers more than 70 types of plastics, and summarizes the chemistry of each type.

In recent years the use of renewable resources as chemical feedstocks for the synthesis of polymeric materials has attracted considerable attention. The reason for such activity is due to the finite nature of traditional petrochemical derived compounds in addition to economic and environmental considerations. Thus a key goal of the coming years will be the development of sustainable raw materials for the chemical industry that will replace current fossil-based feedstocks. The challenge for researchers is to develop natural and manmade synthetics that would reduce the emission of gases. This book gives a thorough overview of the manufacture and uses of low environmental impact polymers. This book will provide information for the experienced user of polymers wanting to use biodegradable materials and also be useful to designers, specifiers, end users and waste managers.

Thermosets and Composites

Fatigue in Composites

Synthesis and Characterization of Novel Functional Lignins -

Practical Guide to Polyvinyl Chloride

Part 2: Test Conditions for Moulding and Extrusion Plastics (ISO 527-2:2012, IDT)

PN-EN ISO 527-3

"The papers from the second European Conference on Composites Testing and Standardisation which was held in Hamburg, Germany in September 1994."

As a method of joining with economic, performance-related and environmental advantages over traditional welding in some applications, adhesive bonding of joints in the marine environment is increasingly gaining popularity. Adhesives in marine engineering provides an invaluable overview of the design and use of adhesively-bonded joints in this challenging environment. After an introduction to the use of adhesives in marine and offshore engineering, part one focuses on adhesive solution design and analysis. The process of selecting adhesives for marine environments is explored, followed by chapters discussing the specific design of adhesively-bonded joints for ship applications and wind turbines. Predicting the failure of bonded structural joints in marine engineering is also considered. Part two reviews testing the mechanical, thermal and chemical properties of adhesives for marine environments together with the moisture resistance and durability of adhesives for marine environments. With its distinguished editor and international team of expert contributors, Adhesives in marine engineering is an essential guide for all those involved in the design, production and maintenance of bonded structures in the marine environment, as well as proving a key source for academic researchers in the field. Provides an invaluable overview of the design and use of adhesively-bonded joints in marine environments Discusses the use of adhesives in marine and offshore engineering, adhesive solution design and analysis, and the design of adhesively-bonded joints for ship applications and wine turbines, among other topics Reviews testing the mechanical, thermal and chemical properties of adhesives for marine environments, together with the moisture resistance and durability of these adhesives

The Effect of Long Term Thermal Exposure on Plastics and Elastomers, Second Edition brings together a wide range of essential data on the effect of long-term thermal exposure on plastics and elastomers, enabling engineers to make optimal material choices and design decisions. This second edition has been thoroughly revised to include the latest data and materials. This highly valuable handbook will support engineers, product designers, R&D professionals, and scientists who are working on plastics products or parts for high temperature environments across a range of industries. This readily available data will make it easy for practitioners to learn about plastic materials and their long-term thermal exposure without having to search the general literature or depend on suppliers. This book will also be of interest to researchers and advanced students in plastics engineering, polymer processing, coatings, and

materials science and engineering. Provides essential data and practical guidance for engineers and scientists working with plastics in high temperature environments Includes introductory chapters on the effect of heat aging and testing methods, providing the underpinning knowledge required to utilize the data Covers a wide range of commercial polymer classes that are updated to include the latest developments in plastics materials

The Effect of Sterilization Methods on Plastics and Elastomers, Fourth Edition brings together a wide range of essential data on the sterilization of plastics and elastomers, thus enabling engineers to make optimal material choices and design decisions. The data tables in this book enable engineers and scientists to select the right materials and sterilization method for a given product or application. The book is a unique and essential reference for anybody working with plastic materials that are likely to be exposed to sterilization methods, be it in medical device or packaging development, food packaging or other applications. Presents essential data and practical guidance for engineers and scientists working with plastics in applications that require sterile packaging and equipment Updated edition removes obsolete data, updates manufacturers, verifies data accuracy, and adds new plastics materials for comparison Provides essential information and guidance for FDA submissions required for new medical devices

Characterization of Polymeric Biomaterials

Plastics

Shipping. 46

A Comparison of Tension Test Data Using ASTM D 638 and ISO 527

BS EN ISO 527-5. Plastics. Determination of Tensile Properties

Handbook of Polymer Testing

Testing of composite materials can present complex problems but is essential in order to ensure the reliable, safe and cost-effective performance of any engineering structure. This essentially practical book, compiled from the contributions of leading professionals in the field, describes a wide range of test methods which can be applied to various types of advanced fibre composites. The book focuses on high modulus, high strength fibre/plastic composites and also covers highly anisotropic materials such as carbon, aramid and glass. Engineers and designers specifying the use of materials in structures will find this book an invaluable guide to best practice throughout the range of industrial sectors where FRCs are employed.

This reference guide brings together a wide range of critical data on the effect of temperature on plastics and elastomers, enabling engineers to make optimal material choices and design decisions. The effects of humidity level and strain rate on mechanical and electrical properties are also covered. The data are supported by explanations of how to make use of the data in real world engineering contexts. High (and low) temperatures can have a significant impact on plastics processing and applications, particularly in industries such as automotive, aerospace, oil and gas, packaging, and medical devices, where metals are increasingly being replaced by plastics. Additional plastics have also been included for polyesters, polyamides and others where available, including polyolefins, elastomers and fluoropolymers. Entirely new sections on biodegradable polymers and thermosets have been added to the book. The level of data included – along with the large number of graphs and tables for easy comparison – saves readers the need to contact suppliers, and the selection guide has been fully updated, giving assistance on the questions which engineers should be asking when specifying materials for any given application. Trustworthy, current thermal data and best practice guidance for engineers and materials scientists in the plastics industry More than 1,000 graphs and tables allow for easy comparison between plastics Entirely new sections added on biopolymers and thermosets.

This book bridges the technology and business aspects of thermosets, providing a practical guide designed for engineers working in real-world industrial settings. The author explores the criteria for material selection, provides information on material properties for each family of thermosets, and discusses the various processing options for each material type. He explains advantages and disadvantages of using thermosets and composites in comparison to competing materials and assesses cost aspects, enabling the reader to balance out technical and economic constraints when choosing a thermoset and processing technology for a given application. This second edition contains a new section on composites solutions for practical problems, gathering information on trends contributing to the breakthrough of composites in various sectors. Other new sections on specific crosslinking processes, processing trends, machinery and equipment manufacturers, applications, bio-sourced thermosets and natural fibers, and recycling of thermosets and composites are included. Case studies are provided, illustrating many design and production challenges. Furthermore, new market data and information about health and safety will be added. All data is fully updated throughout, with pricing in USD and EUR, and both ASTM (North American) and European standards. Thermosets and Thermoset Composites, Second Edition is the only book that gives in-depth coverage of a wide range of subject matters and markets, yet in brevity and concision in a single volume, avoiding the need of consulting a series of other specialized books. By providing the knowledge necessary for selecting a fabrication process, thermoset material and methods for determining the all important cost of thermoset parts this new edition is an invaluable decision-making aid and reference work for practitioners in a field with growing importance. Combining materials data, information on processing techniques, and economic aspects, Biron provides a unique end-to-end approach to the selection and use of materials in the plastics industry and related sectors New material on bio-sourced thermosets, natural fibers, and recycling of thermosets Concise and easy-to-use source of information and decision-making aid

Characterization of Polymeric Biomaterials presents a comprehensive introduction on the topic before discussing the morphology and surface characterization of biomedical polymers. The structural, mechanical, and biological characterization is described in detail, followed by invaluable case studies of polymer biomaterial implants. With comprehensive coverage of both theoretical and experimental information, this title will provide scientists with an essential guide on the topic of these materials which are regularly used for clinical applications, such as implants and drug delivery devices. However, a range of novel polymers and the development and modification of existing medical polymers means that there is an ongoing need to satisfy particular design requirements. This book explains the critical and fundamentals methods to characterize polymer materials for biomedical applications. Presents a self-contained reference on the characterization of polymeric biomaterials Provides comprehensive information on how to characterize biomedical polymers in order to improve design and synthesis Includes useful case studies that demonstrate the characterization of biomaterial implants

Material Selection, Applications, Manufacturing and Cost Analysis

Effect of Temperature and other Factors on Plastics and Elastomers

Engineering Materials Science

Practical Guide to the Assessment of the Useful Life of Plastics

The Effect of UV Light and Weather on Plastics and Elastomers

Low Environmental Impact Polymers

After price and delivery time, the most frequently asked question about a product is 'How long will it last?' Lifetime expectancy is often many years, the service conditions may be complex, and there is a scarcity of definitive data on durability. The situation is complicated by the fact that there are a vast number of degradation agents, service conditions, properties of importance and different plastics. There

are many inherent difficulties in designing durability tests. In many cases, the time scale involved is such that accelerated test conditions are essential. Whilst large amounts of durability data are generated by accelerated methods, much of it is only useful for quality control purposes and relatively little has been validated as being realistically capable of representing service. Most assessments of the lifetime of plastics are made by considering some measure of performance, such as impact strength, and specifying some lower limit for the property, which is taken as the end point. Lifetime is not necessarily measured in time. For example, for some products it will be thought of as the number of cycles of use. The object of this publication is to provide practical guidance on assessing the useful service life of plastics. It describes test procedures and extrapolation techniques together with the inherent limitations and problems. The Guide aims to make available the wealth of information that can be applied to help maximise the effectiveness of a durability-testing programme. This guide seeks to be comprehensive but concentrates on the most common environmental effects causing degradation. The test procedures used are outlined and the relevant textbooks and international standards are well referenced. Examples of lifetime testing studies are cited. The Practical Guide will be useful for anyone responsible for designing, manufacturing or testing plastic components. It will also be of benefit to suppliers and users of end products, as assessment of useful lifetime is critical to the economics and safety aspects of any component. Key features Test methods outlined Accelerated testing discussed Prediction methods described Standards cited Key sources of information listed

Although several fundamental differences exist between ASTM D 638 Standard Test Method of Tensile Properties of Plastics and ISO 527 Plastics-Determination of Tensile Properties, the actual test results can be quite similar. Test data for both test methods have been gathered by an interlaboratory testing provider and the summary statistics of the two groups were compared. The thermoplastic resins tested in this study included polycarbonate (PC), polybutylene terephthalate (PBT), acrylonitrile-butadiene-styrene (ABS) and high impact polystyrene (HIPS). All resins were unfilled, unreinforced, and uncolored. The following properties were analyzed: Tensile Stress at Yield, Tensile Stress at Break, Elongation at Yield, and Modulus of Elasticity. After removing outliers, the data from the remaining labs were analyzed. The strength of agreement between ISO data and ASTM data varied depending on the property and material used. There were surprising similarities for modulus of elasticity since different speeds of testing and calculation methods were used.

This thesis presents novel pathways for one step or two step modifications of different types of lignin without the need of any catalyst. Such novel functional lignins were characterized in detail and are now ready for their utilization in novel polymeric materials and thus for new applications. Hereby the value of lignin can be increased by offering novel strategies of incorporating lignins as building block into polyurethanes, but also various other polymer matrices are thinkable for future studies.

Polyvinyl chloride (PVC) has been around since the late part of the 19th century, although it was not produced commercially until the 1920s; it is the second largest consumed plastic material after polyethylene. PVC products can be rigid or flexible, opaque or transparent, coloured, and insulating or conducting. There is not just one PVC but a whole family of products tailor-made to suit the needs of each application. PVC is extremely cost effective in comparison to other plastics with a high degree of versatility in end-use and processing possibilities, as the reader will note from this book. It is durable, easily maintained, and can be produced in a large range of colours. As a result PVC finds use in an extensive range of applications in virtually all areas of human activity, including medical equipment, construction applications such as flexible roof membranes, pipes and window profiles, toys, automotive parts and electrical cabling. The PVC industry has also started to tackle some of its end-of-life issues. This practical guide provides comprehensive background on the resins and additives, their properties and processing characteristics, as well as discussion of product design and development issues. There have been, and still are, issues and perceptions over environmental and health acceptance covering vinyl chloride monomer, dioxins, phthalate plasticisers, and lead (and cadmium) based heat stabilisers and these are discussed in depth in this book. This book will be of interest to raw materials suppliers and processors or end-users of PVC, as well as anyone with a general interest in this versatile material: resins and additives properties and testing design issues processing, including post processing and assembly property enhancement sustainable development

The Effect of Long Term Thermal Exposure on Plastics and Elastomers

Plastics - Polypropylene (PP) Moulding and Extrusion Materials - Part 2: Preparation of Test Specimens and Determination of Properties [After payment, write to & get a FREE-of-charge, unprotected true-PDF from: Sales@ChineseStandard.net]

Determination of Tensile Properties. General principles. Part 1

towards Bio-based Polyurethane Materials

Eccm-Cts 2

Part 5: Test Conditions for Unidirectional Fibre-reinforced Plastic Composites (ISO 527-5:2009, IDT)

Thermoplastics and Thermoplastic Composites, Third Edition bridges the technology and business aspects of thermoplastics, providing a guide designed to help engineers working in real-world industrial settings. The author explores the criteria for material selection, provides a detailed guide to each family of thermoplastics,

and explains the various processing options for each material type. More than 30 families of thermoplastics are described with information on their advantages and drawbacks, special grades, prices, transformation processes, applications, thermal behavior, technological properties (tenacity, friction, dimensional stability), durability (ageing, creep, fatigue), chemical and fire behavior, electrical properties, and joining possibilities. In this third edition, standards and costs have been updated for all materials, and more information on topics such as bioplastics, 3D printing and recycling have been added. In addition, an entirely new chapter on the concept of 'Industry 4.0' has been added, with guidance and suggestions on the incorporation of virtualization, connectivity, and automation into the plastics engineering process to reduce materials and processing failure. Includes detailed case studies that illustrate best practices across a wide range of applications and industry sectors Presents a new chapter on the 'Industry 4.0' concept Suggests software solutions to assist with design, decision-making and management, along with other forms of automation In this book, experts on textile technologies convey both general and specific information on various aspects of textile engineering, ready-made technologies, and textile chemistry. They describe the entire process chain from fiber materials to various yarn constructions, 2D and 3D textile constructions, preforms, and interface layer design. In addition, the authors introduce testing methods, shaping and simulation techniques for the characterization of and structural mechanics calculations on anisotropic, pliable high-performance textiles, including specific examples from the fields of fiber plastic composites, textile concrete and textile membranes. Readers will also be familiarized with the potential offered by increasingly employed textile structures, for instance in the fields of composite technology, construction technology, security technology and membrane technology.

Following the success of the second (1995) edition, this report takes a fresh perspective on the industry, reviewing changes and developments in industry structure, corporate strategies, market condition, technology and application trends. This profile is fully revised with market data with new forecasts to the year 2005. New and emerging technologies and applications are examined. For a PDF version of the report please call Tina Enright on +44 (0) 1865 843008 for price details.

"This part of ISO 527 specifies the general principles for determining the tensile properties of plastics and plastic composites under defined conditions. Several different types of test specimen are defined to suit different types of material which are detailed in subsequent parts of ISO 527". - page 1.

The Effect of Sterilization on Plastics and Elastomers

Textile Materials for Lightweight Constructions

Physical Methods

Thermoplastics and Thermoplastic Composites

Composites in Infrastructure - Building New Markets

Brydson's Plastics Materials