1. Record Nr. UNINA9910141478103321

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Titolo	Mechanical properties of solid polymers / / I.M. Ward, J. Sweeney
Pubbl/distr/stampa	Chichester, West Sussex, : Wiley, 2013
ISBN	9781119967125 1-119-96712-0 1-299-19019-7 1-119-96711-2 1-118-41319-9
Edizione	[Third edition]
Descrizione fisica	1 online resource (477 p.)
Classificazione	TEC009010
Altri autori (Persone)	SweeneyJ (John)
Disciplina	620.1/9204292 620.19204292
Soggetti	Polymers - Mechanical properties Polímers - Propietats mecàniques
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Description based upon print version of record.
Nota di bibliografia	Includes bibliographical references and index.
Nota di contenuto	Mechanical Properties of Solid Polymers; Contents; Preface; 1 Structure of Polymers; 1.1 Chemical Composition; 1.1.1 Polymerisation; 1.1.2 Cross-Linking and Chain-Branching; 1.1.3 Average Molecular Mass and Molecular Mass Distribution; 1.1.4 Chemical and Steric Isomerism and Stereoregularity; 1.1.5 Liquid Crystalline Polymers; 1.1.6 Blends, Grafts and Copolymers; 1.2 Physical Structure; 1.2.1 Rotational Isomerism; 1.2.2 Orientation and Crystallinity; References; Further Reading; 2 The Mechanical Properties of Polymers: General Considerations; 2.1 Objectives 2.2 The Different Types of Mechanical Behaviour2.3 The Elastic Solid and the Behaviour of Polymers; 2.4 Stress and Strain; 2.4.1 The State of Stress; 2.4.2 The State of Strain; 2.5 The Generalised Hooke's Law; References; 3 The Behaviour in the Rubber-Like State: Finite Strain Elasticity; 3.1 The Generalised Definition of Strain; 3.1.1 The Cauchy-Green Strain Measure; 3.1.2 Principal Strains; 3.1.3 Transformation of Strain; 3.1.4 Examples of Elementary Strain Fields; 3.1.5 Relationship of Engineering Strains to General Strains; 3.1.6 Logarithmic Strain; 3.2 The Stress Tensor

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5.3.1 Experimental Patterns for G1, G2 and so on as a Function of Frequency

Sommario/riassunto

"A substantially updated version of the previous 1983, combined with material from the highly regarded 2004 edition with the detailed mechanics of the first edition. Providing an updated and comprehensive account of the properties of solid polymers, the book covers all aspects of mechanical behaviour. This includes finite elastic behavior, linear viscoelasticity and mechanical relaxations, mechanical anisotropy, non-linear viscoelasicity, yield behavior and fracture. New to this edition is coverage of polymer nanocomposites, and molecular interpretations of yield, e.g. Bowden, Young, and Argon. The book begins by focusing on the structure of polymers, including their chemical composition and physical structure. It goes on to discuss the mechanical properties and behaviour of polymers, the statistical molecular theories of the rubber-like state and describes aspects of linear viscoelastic behaviour, its measurement, and experimental studies. Later chapters cover composites and experimental behaviour, relaxation transitions, stress and yielding. The book concludes with a discussion of breaking phenomena"--