Record Nr. UNINA9910830804703321 Functional fillers for plastics [[electronic resource] /] / edited by Marino **Titolo** Xanthos Pubbl/distr/stampa Weinheim,: Wiley-VCH Verlag GmbH & Co., 2010 **ISBN** 1-282-68576-7 9786612685767 3-527-62984-X 3-527-62985-8 Edizione [Second, updated and enlarged edition] 1 online resource (537 p.) Descrizione fisica Altri autori (Persone) XanthosMarino Disciplina 668.411 Soggetti Plastics - Additives Fillers (Materials) 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 Functional Fillers for Plastics; Contents; Preface to the 2nd Edition; Preface to the 1st Edition; List of Contributors; List of Symbols; Part One: Polymers and Fillers; 1 Polymers and Polymer Composites; 1.1 Thermoplastics and Thermosets; 1.2 Processing of Thermoplastics and Thermosets; 1.3 Polymer Composites; 1.3.1 Types and Components of Polymer Composites: 1.3.2 Parameters Affecting Properties of Composites; 1.3.3 Effects of Fillers/Reinforcements: Functions; 1.3.4 Rules of Mixtures for Composites; 1.3.5 Functional Fillers; 1.3.5.1 Classification and Types 1.3.5.2 Applications, Trends, and ChallengesReferences; 2 Modification of Polymer Properties with Functional Fillers; 2.1 Introduction; 2.2 The Importance of the Interface; 2.3 Modification of Mechanical Properties; 2.3.1 General: 2.3.2 Modulus of Fiber and Lamellar Composites: 2.3.2.1 Continuous Reinforcements; 2.3.2.2 Discontinuous Reinforcements; 2.3.3 Modulus of Composites Incorporating Particulates; 2.3.4 Strength of Fiber and Lamellar Composites; 2.3.4.1 Continuous Reinforcements; 2.3.4.2 Discontinuous Reinforcements; 2.3.5 Strength of Composites Containing Particulates

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Sommario/riassunto

A comprehensive and up-to-date overview of the major mineral and organic fillers for plastics, their production, structure and properties, as well as their applications in terms of primary and secondary functions. Edited and co-authored by Professor Marino Xanthos with contributions by international experts from industry and academia, this book presents methods of mixing/incorporation technologies, surface treatments and modifications for enhanced functionality, an analysis of parameters affecting filler performance and a presentation of current and emerging applications. Additionally, the nov