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Nota di contenuto	Modern Polyesters: Chemistry and Technology of Polyesters and Copolyesters; Contents; Contributors; Series Preface; Preface; About the Editors; I HISTORICAL OVERVIEW; 1 The Historical Development of Polyesters; 1 Introduction; 2 Alkyd and Related Resins; 3 Fibres from Partially Aromatic Polyesters; 3.1 Early Work Leading to Poly(ethylene Terephthalate); 3.2 Spread of Polyester Fibre Production; 3.3 Intermediates; 3.4 Continuous Polymerisation; 3.5 Solid-phase Polymerisation; 3.6 End-use Development; 3.7 High-speed Spinning; 3.8 Ultra-fine Fibres; 4 Other Uses for Semi-aromatic Polyesters 4.1 Films4.2 Moulding Products; 4.3 Bottles; 5 Liquid-crystalline Polyesters; 6 Polyesters as Components of Elastomers; 7 Surface-active Agents; 8 Absorbable Fibres; 9 Polycarbonates; 10 Natural Polyesters; 10.1 Occurrence; 10.2 Poly(b-hydroxyalkanoate)s; 11 Conclusion; References; II POLYMERIZATION AND POLYCONDENSATION; 2 Poly (ethylene Terephthalate) Polymerization - Mechanism, Catalysis, Kinetics, Mass Transfer and Reactor Design; Notation; 1 Introduction; 2

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4 Polyester Cyclic Oligomers via Ring-Chain Equilibration (Depolymerization) 5 Mechanism for Formation of Cyclics via Depolymerization; 6 Polymerization of Oligomeric Ester Cyclics; 7 Conclusions; References; 4 Continuous Solid-state Polycondensation of Polyesters; 1 Introduction; 2 The Chemical Reactions of PET in the Solid State; 2.1 Basic Chemistry; 2.2 Mechanism and Kinetics; 2.3 Parameters Affecting SSP; 2.3.1 Temperature; 2.3.2 Time; 2.3.3 Particle Size; 2.3.4 End Group Concentration; 2.3.5 Crystallinity; 2.3.6 Gas Type; 2.3.7 Gas Purity; 2.3.8 Catalyst; 2.3.9 Molecular Weight

3 Crystallization of PET

Sommario/riassunto

Provides an overview of the family of polyester polymers which comprise an important group of plastics that span the range of commodity polymers to engineering resins. It describes the preparation, properties and applications of polyesters. Readers will also find details on polyester-based elastomers, biodegradable aliphatic polyester, liquid crystal polyesters and unsaturated polyesters for glass-reinforced composites. Presents an overview of the most recent developments. Explores synthesis, catalysts, processes, properties and applications. Looks at emerging polyester materials
