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Nota di contenuto	WOOD-PLASTIC COMPOSITES; CONTENTS; Preface; 1. Foreword-Overview: Wood-Plastic Composites; WPC: Pricing Restrictions; WPC: Brands and Manufacturers; Flexural Strength; Flexural Modulus and Deflection; Deck Boards; Stair Treads; Thermal Expansion-Contraction; Shrinkage; Slip Resistance; Water Absorption, Swell, and Buckling; Microbial Degradation; Termite Resistance; Flammability; Oxidation and Crumbling; Photooxidation and Fading; Wood-Plastic Composites-Products, Trends, Market Size and Dynamics, and Unsolved (or Partially Solved) Problems; WPC Products; The Public View: Perception WPC Market Size and DynamicsCompetition on the WPC Market; Unsolved (or Only Partially Solved) R & D Problems; References; 2. Composition of Wood-Plastic Composite Deck Boards: Thermoplastics; Introduction; Polyethylene; Low-Density Polyethylene (LDPE); Medium-Density Polyethylene (MDPE); High-Density Polyethylene (HDPE); Polypropylene; Polyvinyl Chloride; Acrylonitrile-Butadiene-Styrene Copolymer (ABS); Nylon 6 and Other Polyamides; Conclusion; Addendum: ASTM Tests Covering Definitions of Technical Terms and Their Contractions Used in Plastic Industry and Specifications of Plastics

ASTM D 883 "Standard Terminology Relating to Plastics"ASTM D 1600 "Standard Terminology for Abbreviated Terms Relating to Plastics"; ASTM D 1784 "Standard Specifications for Rigid Poly(Vinyl Chloride) (PVC) Compounds and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds"; ASTM D 1972 "Standard Practice for Generic Marking of Plastic Products"; ASTM D 4066 "Standard Classification System for Nylon Injection and Extrusion Materials (PA)"; ASTM D 4101 "Standard Specification for Polypropylene Injection and Extrusion Materials" ASTM D 4216 "Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) and Related PVC and Chlorinated Poly(Vinyl Chloride) (CPVC) Building Products Compounds"ASTM D 4396 "Standard Specification for Rigid Poly(Vinyl Chloride) (PVC) and Chlorinated Poly(Vinyl Chloride) (CPVC) Compounds for Plastic Pipe and Fittings Used in Nonpressure Applications"; ASTM D 4673 "Standard Classification System for Acrylonitrile-Butadiene-Styrene (ABS) Plastics and Alloys Molding and Extrusion Materials"; ASTM D 4976 "Standard Specification for Polyethylene Plastics Molding and Extrusion Materials" ASTM D 5203 "Standard Specification for Polyethylene Plastics Molding and Extrusion Materials from Recycled Postconsumer (HDPE) Sources" ASTM D 6263 "Standard Specification for Extruded Rods and Bars Made from Rigid Poly(Vinyl Chloride) (PVC) and Chlorinated Poly(Vinyl Chloride) (CPVC)"; ASTM D 6779 "Standard Classification System for Polyamide Molding and Extrusion Materials (PA)"; References; 3. Composition of Wood-Plastic Composites: Cellulose and Lignocellulose Fillers; Introduction; A Brief History of Cellulose Fillers in WPC in U.S. Patents; Beginning of WPC: Thermosetting Materials Cellulose as a Reinforcing Ingredient in Thermoplastic Compositions

Sommario/riassunto

A comprehensive, practical guide to wood-plastic composites and their propertiesThis is the first book that presents an overview of the main principles underlying the composition of wood-plastic composite (WPC) materials and their performance in the real world. Focusing on the characteristics of WPC materials rather than their manufacture, this guide bridges the gap between laboratory-based research and testing and the properties WPC materials exhibit when they're used in decks, railing systems, fences, and other common applications. Complete with practical examples and case studies, t