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Nota di contenuto	Front Cover; Series Editor; HOLLOW GLASS MICROSPHERES FOR PLASTICS,ELASTOMERS,AND ADHESIVES COMPOUNDS; Copyright; Contents; Contributors; 1 - Introduction; Early Application Examples; References; 2 - Characterization; Density; True Density Using Gas Pycnometer; Bulk Isostatic Compression of HGMs; Uniaxial Compression Testing of Individual HGMs; Thermal Characterization; Thermal Conductivity; Electrical Properties and Dielectric Properties; Microscopic Imaging of HGMs; References; 3 - Hollow Glass Microspheres in Thermoplastics; Introduction; Benefits of HGMs in Thermoplastics Productivity Benefits of HGMs Through Faster Cooling Rates from the MeltDimensional Stability; Processing of HGMs; Pelletizing Effect on HGM Survival; Effect of Polymer Melt Viscosity on HGM Survival; Effect of Back Pressure on HGM Survival; Effect of HGM Loading on HGM Survival; HGMs in Polyolefins; HGMs in GF Filled PP; Case Study- Chemically Coupled GF Reinforced PP; HGMs in Talc Filled PP; HGMs in Unfilled Polyolefins; HGMs in PA; Comparative Review of other Thermoplastic Weight Reduction Methodologies and Combinations with HGMs; Referencs 4 - Hollow Glass Microspheres in Rubbers and ElastomersBenefits of

HGM Use in Rubber; Physical Property Changes; Incorporation of HGMs in Rubber; 2-Roll Mills; Internal Mixers; Other Incorporation Methods; Rubber Additive Formulations and HGM Considerations; Application of HGM in Rubber; Example 1-Pneumatic Tires; Application of HGM in Rubber; Example 2-Shoe Soles; Application of HGM in Rubber; Example 3-Wire and Cable Compounds; References; 5 - Hollow Glass Microspheres in Sheet Molding Compounds; Sheet Molding Compound Basics; SMC Process; Hollow Glass Microspheres in SMCs; References 6 - Hollow Glass Microspheres in Thermosets-Epoxy Syntactic FoamsIntroduction; Application of Epoxy Syntactic Foams; Hollow Particle Properties; Fabrication of Syntactic Foams; Mechanical Properties; Compressive Properties; Tensile Properties; Electrical Properties; Thermal Properties; Multifunctional Syntactic Foams; Summary; List of Symbols; Acknowledgments; References; 7 - Hollow Glass Microspheres in Polyurethanes; Polyurethane Basics; HGMs in Thermoplastic PUs; HGMs in Thermoset PU; Syntactic PU Foams; Specialty PU Composites; PU Foams; References 8 - Hollow Glass Microspheres in PlasticsBackground Information; HGM Use and Benefits for Plastics; Plastics Mixing and Preparation; References; 9 - Hollow Glass Microspheres in Repair Compounds; Auto Repair Compounds; Wall Repair (Spackle Compounds); Tape Joint Compound; References; 10 - Handling of Hollow Glass Microspheres; Silos and Hoppers; Transfer of HGMs; References; 11 - Mixing and Dispersion of Hollow Glass Microsphere Products; Hollow Glass Microsphere Transport to Mixer; Fundamentals of Dispersion; Mixing and Dispersing Hollow Glass Microsphere Products Mixing Dynamics and Dispersion Blade Placement

Sommario/riassunto

Hollow Glass Microspheres for Plastics, Elastomers, and Adhesives Compounds brings together, for the first time, all of the practical and theoretical aspects of glass bubble manufacturing, including its properties, processing, and applications, as well as regulatory, environmental, and health and safety aspects. The book enables the reader to evaluate the applicability of glass bubbles to various applications involving polymers in thermoplastics, elastomers, liquid thermosets, and adhesives. It is an indispensable guide for material selection and improving sustainability of products. Re
