

|                         |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1. Record Nr.           | UNINA9910825547203321                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Autore                  | Fink Johannes Karl                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Titolo                  | A concise introduction to additives for thermoplastic polymers / /<br>Johannes Karl Fink                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Pubbl/distr/stampa      | Hoboken, NJ, : Wiley<br>Salem, MA, : Scrivener Pub., c2010                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| ISBN                    | 9786612684012<br>9781282684010<br>1282684019<br>9780470624241<br>0470624248<br>9781613441633<br>1613441630<br>9780470624234<br>047062423X                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Descrizione fisica      | 1 online resource (284 p.)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Collana                 | Wiley-Scrivener ; ; v.1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Disciplina              | 668.4/23<br>668.9                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Soggetti                | Polymers - Additives<br>Thermoplastics                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Lingua di pubblicazione | Inglese                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Formato                 | Materiale a stampa                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Livello bibliografico   | Monografia                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Note generali           | Description based upon print version of record.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Nota di contenuto       | A Concise Introduction to Additives for Thermoplastic Polymers;<br>Contents; Preface; 1 Introduction; 1.1 Classification; References; 2<br>Plasticizers; 2.1 Principle of Action; 2.2 Principle of Selection; 2.3<br>Characterization; 2.4 Risks and Drawbacks; 2.4.1 Leaching; 2.4.2<br>Inherent Toxicity; 2.5 Classes of Plasticizers; 2.5.1 Phthalate<br>Plasticizers; 2.5.2 Cyclohexanoic Diesters; 2.5.3 Phosphate Plasticizers;<br>2.5.4 Aliphatic Esters; 2.5.5 Polymeric Plasticizers; 2.5.6 Ionic Liquids;<br>2.6 Specific Examples of Application; 2.6.1 Heat Shrinkable Films; 2.6.2<br>Adhesive Compositions<br>2.6.3 Interlayer Films for Safety Glasses2.6.4 Electrolyte Membranes;<br>2.6.5 Porous Electrodes; 2.6.6 Biodegradable Polymers; 2.6.7 |

Plasticizers for Energetic Polymers; References; 3 Fillers; 3.1 Surface Modification; 3.1.1 Siloxanes; 3.1.2 Dispersion and Coupling Additives; 3.2 Special Applications; 3.2.1 Flame Retardant Fillers; 3.2.2 Conductive Fillers; 3.2.3 Solder Precoated Fillers; 3.2.4 Nano Clays; 3.2.5 Mixed Matrix Membranes; References; 4 Colorants; 4.1 Physics Behind a Color; 4.1.1 Human Eye; 4.1.2 Tristimulus Values; 4.1.3 Color Spaces; 4.2 Color Index; 4.3 Test Standards 4.4 Pigments 4.5 Organic Colorants; References; 5 Optical Brighteners; 5.1 Basic Principles; 5.2 Measurement; 5.3 Inorganic Brighteners; 5.4 Organic Optical Brighteners; 5.4.1 Reactive Optical Brighteners; 5.4.2 Melt Extrusion; 5.4.3 Photographic Supports; References; 6 Antimicrobial Additives; 6.1 Modes of Action; 6.1.1 Types of Irritations; 6.2 Plasticizers; 6.3 Special Formulations; 6.3.1 Contact Lenses; 6.3.2 Food Packaging; 6.3.3 Polymers with Inherent Antimicrobial Properties; References; 7 Flame Retardants; 7.1 Mechanisms of Flame Retardants; 7.1.1 Flame Cooling of Halogens 7.2 Smoke Suppressants 7.3 Admixed Additives; 7.4 Bonded Additives; 7.4.1 Examples of Polymers; References; 8 Lubricants; 8.1 Principle of Action; 8.2 Methods of Incorporation; 8.2.1 Conventional Method; 8.2.2 Separate Delivery of the Lubricant; 8.3 Types of Lubricants; 8.3.1 Alcohols; 8.3.2 Fatty Acids, Esters and Amides; 8.3.3 Waxes; 8.3.4 Polymeric Lubricants; 8.4 Special Applications; 8.4.1 PVC; 8.4.2 Chlorinated PVC; 8.4.3 Electrically Conductive Polymers; References; 9 Antistatic Additives; 9.1 Types of Additives; 9.2 Areas of Application; 9.3 Additives in Detail 9.3.1 Conventional Additives 9.3.2 Polymeric Additives; 9.3.3 External Antistatic Additives; 9.3.4 Intrinsically Antistatic Compositions; 9.3.5 Conductive Fillers; References; 10 Slip Agents; 10.1 Basic Principles of Action; 10.2 Compounds; 10.3 Special Formulations; 10.3.1 Poly(ethylene terephthalate); 10.3.2 Formulations for Poly(ethylene); References; 11 Surface Improvers; 11.1 Additives; 11.1.1 Fluorocarbon Compounds; 11.1.2 Acrylics; 11.1.3 Modified Pigments; 11.1.4 Organic Salts; References; 12 Nucleating Agents; 12.1 Crystalline Polymers; 12.1.1 Crystal Structures 12.1.2 Modification of Properties by Crystallinity

## Sommario/riassunto

Describes twenty-one of the most important and commonly used additives A Concise Introduction to Additives for Thermoplastic Polymers focuses on additives for thermoplastic polymers and describes 21 of the most important and commonly used additives from Plasticizers and Fillers to Optical Brighteners and Anti-Microbial additives. It also includes chapters on safety and hazards, and prediction of service time models. While there are many exhaustive and complex books dealing with additives for polymers, the size of them deter students and many industry engineers from using them