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Nota di contenuto	Additives for Coatings; Contents; 1 Introduction; 1.1 Additives in Coating Materials; 1.2 Definitions; 1.3 Classification According to Function; 1.4 Quantities Used; 1.5 Economic Significance of Coating Additives; References; 2 Basics; 2.1 Introduction; 2.2 Interactions; 2.3 Chemical Composition; 2.4 Effectiveness of Additives; 2.5 Applications; References; 3 Thickeners; 3.0 Basics; 3.0.1 Introduction; 3.0.2 Rheology and Viscosity; 3.0.3 Viscosity Measurement; 3.1 Inorganic Thickeners; 3.1.1 Introduction; 3.1.2 Organoclays; 3.1.3 Production of the Organoclays; 3.1.4 Rheology and Organoclays 3.1.5 Influence of Organoclays on Various Coating Properties 3.1.5.1 Sedimentation; 3.1.5.2 Sagging; 3.1.5.3 Flow and Levelling; 3.1.6 Incorporation Procedures; 3.1.6.1 Powder Method; 3.1.6.2 Paste Method; 3.1.6.3 Easily Dispersable Organoclays; 3.1.7 Trade Products; 3.2 Organic Thickeners; 3.2.0 Introduction; 3.2.0.1 Organic Thickeners for Water-Borne Paints; 3.2.0.2 Thickeners for Solvent-Based Paints; 3.2.1 Cellulose Derivatives; 3.2.1.1 The Chemistry of Cellulose Derivatives; 3.2.1.2 The Addition of Cellulose Ethers to Paints; 3.2.1.3

Paint Properties Influenced by Cellulose Ethers

3.2.1.4 Associative Cellulose Ethers; 3.2.1.5 Commercial Products; 3.2.1.6 New Developments; 3.2.1.7 Toxicology and Disposal; 3.2.2 PUR Thickeners; 3.2.2.1 Introduction; 3.2.2.2 Chemical Composition and Delivery Form; 3.2.2.3 Thickening Mechanism; 3.2.2.4 Application Properties of PUR Thickeners; 3.2.2.5 Applications; 3.2.2.6 Formulation of Coating Materials with PUR Thickeners; 3.2.2.7 Coating Properties; 3.2.2.8 Commercial Products; 3.2.3 Organic Thickeners for Solvent-Borne Coatings; 3.2.3.1 Introduction; 3.2.3.2 Product Survey; 3.2.3.3 Hydrogenated Castor-Oil-Based Thickeners; 3.2.3.4 Polyamides; 3.2.3.5 Overbased Sulphonates; 3.2.3.6 Polyolefins; 3.2.3.7 Commercial Products; References; 4 Surface-Active Agents; 4.1 Wetting and Dispersing Agents; 4.1.1 Introduction; 4.1.2 Definitions; 4.1.3 The Dispersion Process; 4.1.3.1 Pigment Wetting; 4.1.3.2 Mechanical Disruption; 4.1.3.3 Stabilization; 4.1.3.4 Stabilization in Polar Media: Practical Evaluation; 4.1.3.5 Stabilization in Nonpolar Media: Practical Evaluation; 4.1.4 Chemical Composition of Wetting and Dispersing Agents; 4.1.4.1 Polymeric Dispersing Agents; 4.1.5 Problem-Solving; 4.1.6 Procedures for Determining Dispersion Efficiency; 4.1.6.1 Surface-Charge Measurement; 4.1.6.2 Dispersant Demand; 4.1.6.3 Monitoring the Dispersion Process; 4.1.6.4 Degree of Dispersion; 4.1.6.5 Degree of Flocculation; 4.1.6.6 Flooding: Rub-Out Test; 4.1.7 Biological and Toxicological Properties; 4.1.7.1 Surfactants; 4.1.7.2 Polymers; 4.1.8 Commercial Products; 4.2 Defoaming of Aqueous Paint Materials; 4.2.1 Introduction; 4.2.2 Foam Formation in Aqueous Paints; 4.2.3 Causes of Foam Stabilization; 4.2.3.1 Stability-Reducing Parameters; 4.2.3.2 Parameters That Promote Foam Stability; 4.2.4 Composition and Effect of Defoamers and Foam Inhibiting Agents

Sommario/riassunto

No doubt: A perfect coating has to look brilliant! But other properties of coatings are also most important. Coatings have to be durable, tough and easily applicable. Additives are the key to success in achieving these characteristics, even though the amounts used in coating formulations are small. It is not trivial at all to select the best additives. In practice, many series of tests are often necessary, and the results do not explain, why a certain additive improves the quality of a coating and another one impairs the coating. This book is dedicated to developers and applicant
