

1. Record Nr.	UNINA9911018961803321
Titolo	Industrial inorganic pigments // edited by Gunter Buxbaum and Gerhard Pfaff
Pubbl/distr/stampa	Weinheim, : Wiley-VCH, c2005
ISBN	9786610519507 9781280519505 1280519509 9783527603732 3527603735 9783527604036 3527604030
Edizione	[3rd, completely rev. ed.]
Descrizione fisica	1 online resource (318 p.)
Altri autori (Persone)	BuxbaumGunter PfaffGerhard
Disciplina	667.29
Soggetti	Pigments Paint
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
Note generali	Previous ed.: 1998.
Nota di bibliografia	Includes bibliographical references (p. 289-295) and index.
Nota di contenuto	Industrial Inorganic Pigments; Contents; Preface to the Third Edition; Preface to the Second Edition; List of Contributors; 1 Introduction; 1.1 General Aspects; 1.1.1 History, Classification, Standards; 1.1.1.1 Definition; 1.1.1.2 History; 1.1.1.3 Classification; 1.1.2 Economic Aspects and Uses; 1.1.2.1 Economic Aspects; 1.1.2.2 Uses; 1.1.3 New Developments; 1.2 General Chemical and Physical Properties; 1.2.1 Fundamental Aspects; 1.2.1.1 Chemical Composition; 1.2.1.2 Analysis; 1.2.1.3 Crystallography and Spectra; 1.2.1.4 Particle Size; 1.2.2 Methods of Determination; 1.2.2.1 General Methods 1.2.2.2 Matter Volatile and Loss on Ignition1.2.2.3 Aqueous Extracts; 1.2.2.4 Particle Size Distribution; 1.2.2.5 Pigment Density; 1.2.2.6 Hardness and Abrasiveness; 1.3 Color Properties; 1.3.1 Fundamental Aspects; 1.3.1.1 Colorimetry; 1.3.1.2 Kubelka-Munk Theory; 1.3.1.3 Multiple Scattering; 1.3.1.4 Mie's Theory; 1.3.2 Color Measurement; 1.3.2.1 General; 1.3.2.2 Methods of Determination; 1.3.3 Tinting

Strength, Lightening Power, and Scattering Power; 1.3.3.1 Tinting Strength; 1.3.3.2 Lightening Power; 1.3.3.3 Relative Scattering Power; 1.3.4 Hiding Power and Transparency 1.3.4.1 Hiding Power 1.3.4.2 Transparency; 1.4 Stability Towards Light, Weather, Heat, and Chemicals; 1.4.1 Fundamental Aspects; 1.4.2 Test Methods; 1.4.2.1 Light Stability; 1.4.2.2 Weather Resistance; 1.4.2.3 Heat Stability; 1.4.2.4 Fastness to Chemicals; 1.5 Behavior of Pigments in Binders; 1.5.1 Fundamental Aspects; 1.5.2 Test Methods; 1.5.2.1 Pigment-Binder Interaction; 1.5.2.2 Dispersing Behavior in Paint Systems; 1.5.2.3 Miscellaneous Pigment-Binder Systems; References; 2 White Pigments; 2.1 Titanium Dioxide; 2.1.1 Properties; 2.1.1.1 Physical Properties; 2.1.1.2 Chemical Properties 2.1.1.3 Surface Properties of TiO₂ Pigments 2.1.2 Raw Materials; 2.1.2.1 Natural Raw Materials; 2.1.2.2 Synthetic Raw Materials; 2.1.3 Production; 2.1.3.1 Sulfate Method; 2.1.3.2 The Chloride Process; 2.1.3.3 Pigment Quality; 2.1.3.4 Aftertreatment; 2.1.3.5 Waste Management; 2.1.4 Economic Aspects; 2.1.5 Pigment Properties; 2.1.5.1 Scattering Power; 2.1.5.2 Mass-Tone (or Color); 2.1.5.3 Dispersion; 2.1.5.4 Lightfastness and Weather Resistance; 2.1.6 Analysis; 2.1.7 Uses of Pigmentary TiO₂; 2.1.7.1 Paints and Coatings; 2.1.7.2 Printing Inks; 2.1.7.3 Plastics; 2.1.7.4 Fibers; 2.1.7.5 Paper 2.1.7.6 Other Areas of Application 2.1.8 Uses of Nonpigmentary TiO₂; 2.1.8.1 Electroceramics; 2.1.8.2 Catalysts; 2.1.8.3 Mixed Metal Oxide Pigments; 2.1.8.4 UV Absorption; 2.1.9 Toxicology; 2.2 Zinc Sulfide Pigments; 2.2.1 Properties; 2.2.2 Production; 2.2.2.1 Raw Materials; 2.2.2.2 Lithopone; 2.2.2.3 Sachtolith; 2.2.2.4 Hydrothermal Process; 2.2.2.5 Environmental Protection; 2.2.3 Commercial Products; 2.2.4 Uses; 2.2.4.1 Lithopone; 2.2.4.2 Sachtolith; 2.2.5 Economic Aspects; 2.2.6 Toxicology; 2.3 Zinc Oxide (Zinc White); 2.3.1 Introduction; 2.3.2 Properties; 2.3.2.1 Physical Properties 2.3.2.2 Chemical Properties

Sommario/riassunto

Inorganic Pigments significantly change our surroundings. They are irreplaceable for the coloring of construction materials - their applications range from concrete to artist's colors, from industrial paints to toners in photocopiers, from coloring in foodstuffs to raw materials for catalysts. This book offers everything there is to know about inorganic pigments in a concise and thorough presentation: their manufacturing processes, their applications and markets, their testing procedures and standards, and also the health and environmental regulations relating to them. The reader is pr