

Physical Characterization of Coatings Introduction to Rheology and Surface Analysis

Michael Osterhold

Content

Preface	5
Chapter 1 – Introduction Rheology Flow Behaviour and Rotational Rheometers	7
Chapter 2 – Rheological Measurements Rheological Characterization of Coatings Yield Point, Thixotropy and Oscillation	13
Chapter 3 – Application Examples Rheological Methods for Coating Systems	25
Chapter 4 – Rheology and Surface Charge Characterization of Disperse Systems (Part 1)	39
Chapter 5 – Particle Size Determination Characterization of Disperse Systems (Part 2)	53
Chapter 6 – Thermal Analysis Dynamic Mechanical Analysis DMA	61
Chapter 7 – Scratch Resistance Methods for Characterizing the Scratch Resistance	69

Chapter 8 – Surface Structure Analysis of the Surface Structure of Substrates and Coatings	83
Chapter 9 – Surface Tension Surface Tension and Physical Coating Properties	97
Chapter 10 – Coating Defects Microscopical Defect Analysis	117
Chapter 11 – Weathering Introduction to Weathering Testing	129
Literature Sources	137
Biography	140