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Nota di contenuto	Applied Adhesive Bonding; Contents; Preface; 1 Introduction; 1.1 Bonding as a Joining Process; 1.2 Advantages and Disadvantages of Bonding; 1.3 Terms and Definitions; 2 Structure and Classification of Adhesives; 2.1 Structure of Adhesives; 2.1.1 Carbon as Central Element; 2.1.2 Monomer - Polymer; 2.1.3 Polymer Formation; 2.2 Classification of Adhesives; 2.2.1 Adhesives Curing by Chemical Reaction (Reactive Adhesives); 2.2.2 Adhesives Curing without Chemical Reaction (Physically Setting Adhesives); 2.2.3 Solvent-Containing and Solvent-Free Adhesives 2.2.4 Adhesives on Natural and Synthetic Basis2.2.5 Adhesives on Organic and Inorganic Basis; 2.2.6 Application-Related Names of Adhesives; 3 From Adhesive to Adhesive Layer; 3.1 Reactive Adhesives - Fundamentals; 3.1.1 Pot Life; 3.1.2 Mixing Ratio of the Components; 3.1.3 Impact of Time on Adhesive Curing; 3.1.4 Impact of Temperature on Adhesives; 3.2.1 Two-Component and One-Component Reactive Adhesives; 3.2.1 Two-Component Reactive Adhesives; 3.2.2 One-Component Reactive Adhesives; 3.3 Properties of Adhesive Layers; 3.3.1 Thermoplastics; 3.3.2 Thermoset Plastics; 3.3.3 Elastomers 3.3.4 Glass Transition Temperature3.3.5 Creep; 4 Important Reactive

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	Adhesives; 4.1 Epoxy Resin Adhesives; 4.1.1 Two Component Epoxy Resin Adhesives; 4.1.2 One-Component Epoxy Resin Adhesives; 4.1.3 Reactive Epoxy Resin Hot-Melt Adhesives; 4.1.4 Properties and Application of Epoxy Resin Adhesives; 4.2 Polyurethane (PUR) Adhesives; 4.2.1 Two-Component Polyurethane Adhesives (Solvent- Free); 4.2.2 One-Component Polyurethane Adhesives (Solvent-Free); 4.2.3 Reactive Polyurethane Hot-Melt Adhesives (Solvent-Free); 4.2.4 One-Component Polyurethane Solvent-Based Adhesives 4.2.5 Two-Component Polyurethane Solvent-Based Adhesives; 4.3.1 Cyanoacrylate Adhesives; 4.3.2 Radiation-Curing Adhesives; 4.3.3 Methacrylate Adhesives; 4.3.2 Radiation-Curing Adhesives; 4.3.3 Methacrylate Adhesives; 4.3.4 Anaerobic Adhesives; 4.4 Unsaturated Polyester Resins (UP-Resins); 4.5 Phenolic Adhesives; 4.9 Sealing Materials; 4.10 Polymer Mortars; 5 Physically Setting Adhesives; 5.1 Hot-Melt Adhesives; 5.2 Solvent-Based Adhesives; 5.3 Contact Adhesives; 5.4 Dispersion Adhesives; 5.5 Plastisols 5.6 Pressure-Sensitive Adhesives, Adhesive Tapes5.7 Adhesive Strips; 5.8 Glue Sticks; 5.9 Adhesives Based on Natural Raw Materials; 5.10 Adhesive son an Inorganic Basis; 6 Adhesive Forces in Bonded Joints; 6.1 Adhesive Forces Between Adhesive Layer and Adherend (Adhesion); 6.2 Wetting; 6.3 Surface Tension; 6.4 Adhesive Forces Inside an Adhesive Layer (Cohesion); 7 Production of Bonded Joints; 7.1 Surface Treatment; 7.1.1 Surface Preparation; 7.1.1.1 Cleaning; 7.1.2 Adjusting; 7.1.1.3 Degreasing; 7.1.1.4 Degreasing Agents; 7.1.2 Surface Pretreatment; 7.1.2.1 Mechanical Surface Pretreatment 7.1.2.2 Physical and Chemical Surface Pretreatment
Sommario/riassunto	This manual provides the most important information on successful bonding. Various practical advices and helpful tips are useful for the handling of adhesives. Due to its didactically structured content, the book may also serve as a medium for training courses in bonding engineering. The basics of this innovative joining procedure are described in a practical and easily understandable way suitable for the application in trade and industry.