

CONTENTS

Section A-Fundamentals

1. Introduction to Adhesives	3
2. The Role of Adhesives in the Economy	18
3. Influence of Constitution on Adhesion	33
4. Roll Application of Adhesives	72
5. Properties, Testing, Specification and Design of Adhesives	92

Section B-Adhesive Materials

6. Inorganic Adhesives and Cements	117
7. Animal Glues	139
8. Fish Glue	152
9. Casein Glues and Adhesives	158
10. Soybean Glues	172
11. Blood Glues	181
12. Starch-Based Adhesives	192
13. Cellulosics	212
14. Resins for Rubber-Based Adhesives	222
15. Natural Rubber and Reclaimed Rubber Adhesives	242
16. Butyl rubber and Polyisobutylene	255
17. Nitrile Rubber Adhesives	273
18. Styrene-Butadiene Rubber Adhesives	293
19. Thermoplastic Rubber in Adhesives	304
20. Carboxylic Polymers in Adhesives	331
21. Neoprene Adhesives	343
22. Polysulfide Sealants and Adhesives	368
23. Phenolic Resin Adhesives	382
24. Resorcinolic Adhesives	417
25. Amino Resin Adhesives	424
26. Epoxy Resin Adhesives	434
27. Polyurethane and Isocyanate-Based Adhesives	446
28. Polyvinyl Acetate Emulsions and Polyvinyl Alcohol for Adhesives	465
29. Vinyl Acetate-Ethylene Copolymer Emulsions in Adhesives	484
30. Ethylene Copolymer-Based Hot Melt Adhesives	495
31. Polyvinyl Acetal Adhesives	507
32. Acrylic Adhesives and Sealants	528
33. Anaerobic Adhesives	560

34. Cyanoacrylate Adhesives	569
35. Polyamide Adhesives	581
36. Polyethylenimine in Adhesives	592
37. Aromatic Polyimide Adhesives and Bonding Agents	597
38. Other High Temperature Adhesives	619
39. Silicone Adhesive Sealants	628
40. Organofunctional Silane Coupling Agents	640
Section C-Adherends and Bonding Technology	
41. Bonding Plastics	655
42. Bonding Textiles to Rubber	661
43. Wood adhesion	669
44. Water-Based and Solvent-Based Adesives	679
45. Sealants and Caulks	692
46. Water Remoistenable Adhesives	716
47. Pressure-Sensitive Tapes and Labels	724
48. Bonded and Coated Abrasives	736
49. Adhesives for Building Construction	745
50. Adhesives in the Electrical Industry	776
51. Adhesives in the Automobile Industry	782
52. Nonwoven Fabrics	797
53. Medical and Biological Adhesives	818
54. Metallization of Plastics	836
55. The Mechanical Handling of Multi-Component Adhesives	855
Index	895