



DEVELOPMENTS IN CLAY SCIENCE

2

APPLIED CLAY MINERALOGY

OCCURRENCES, PROCESSING AND
APPLICATION OF KAOLINS, BENTONITES,
PALYGORSKITE-SEPIOLITE, AND COMMON CLAYS

H.H. MURRAY



CONTENTS

Preface	vii
Chapter 1. Introduction	1
Chapter 2. Structure and Composition of the Clay Minerals and their Physical and Chemical Properties	7
Chapter 3. Geology and Location of Major Industrial Clay Deposits	33
Chapter 4. Exploration, Mining, and Processing	67
Chapter 5. Kaolin Applications	85
Chapter 6. Bentonite Applications	111
Chapter 7. Palygorskite and Sepiolite Applications	131
Chapter 8. Common Clays	141
Appendix A. Commonly Used Tests and Procedures for Evaluating Kaolin Samples. . .	149
Appendix B. Common Tests for Evaluation of Ball Clay Samples	161
Appendix C. Commonly Used Tests to Evaluate Bentonite Samples	169
Appendix D. Palygorskite-Sepiolite Laboratory Tests	171
Subject Index	179