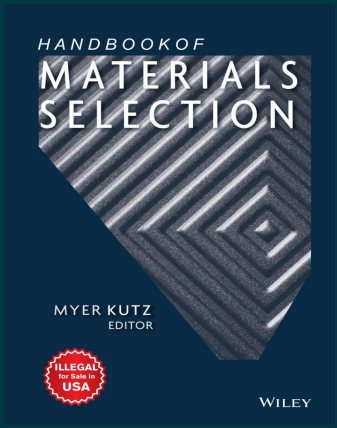
WILEY



Handbook of Materials Selection

By Myer Kutz

Hardcover 9789373323336 **₹2,800.00**

Pages: 1520

Description

With literally hundreds of materials or combinations of materials and thousands of specific applications of each it is difficult at best for a developer, designer or engineer to have a complete working knowledge of every material under every application. This handbook is the first single volume source to classify materials and their properties by the type of engineering application needed, and in a second section classify materials by their properties. This format makes our handbook the most useful single source for engineers, designers, and materials scientists across all levels of the market.

About the Author

Myer Kutz

MYER KUTZ is founder and President of Myer Kutz Associates, Inc., a publishing and information services consulting firm. He is the editor of the Mechanical Engineers' Handbook, Second Edition, also published by Wiley.

Table of Contents

PART 1: QUANTITATIVE METHODS OF MATERIALS SELECTION
1. Quantitative Methods of Materials Selection (Mahmoud M. Farag)

PART 2: MAJOR MATERIALS.
2. Carbon and Alloy Steels (Bruce L. Bramfitt)
3. Stainless Steels (James Kelly)
4. Aluminum Alloys (J. G. Kaufman)
5. Copper and Copper Alloys (Konrad J. A. Kundig)
6. Selection of Titanium Alloys for Design (Matthew J. Donachie)
7. Nickel and Its Alloys (T. H. Bassford and Jim Hosier)
8. Magnesium and Its Alloys (Robert S. Busk)
9. Corrosion and Oxidation of Magnesium Alloys (D. Eliezer and H. Alves)
10. Selection of Superalloys for Design (Matthew J. Donachie and Stephen J. Donachie)
11. Plastics: Thermoplastics, Thermosets, and Elastomers (Edward N. Peters)
12. Composite Materials (Carl Zweben)
13. Smart Materials (James A. Harvey)
14. Overview of Ceramic Materials, Design, and Application (R. Nathan Katz)

PART 3: FINDING AND MANAGING MATERIALS INFORMATION AND DATA
15 How to Find Materials Properties Data (Patricia E. Kirkwood)

16. Sources of Materials Data (J. G. Kaufman)
17. Managing Materials Data (Deborah Mies)
18. Information for Materials Procurement and Disposal (J. H. Westbrook)

PART 4: TESTING AND INSPECTION
19. Testing of Metallic Materials (Peter C. McKeighan)
20. Plastics Testing (Vishu Shah)
21. Characterization and Identification of Plastics (Vishu Shah)
22. Professional and Testing Organizations (Vishu Shah)
23. Ceramics Testing (Shawn K. McGuire and Michael G. Jenkins)
24. Nondestructive Inspection (Robert L. Crane and Ward D. Rummel)

PART 5: FAILURE ANALYSIS
25. Failure Modes: Performance and Service Requirements for Metals (J. A. Collins and S. R. Daniewicz)
26. Failure Analysis of Plastics (Vishu Shah)
27. Failure Modes: Performance and Service Requirements for Ceramics (Dietrich Munz)
28. Mechanical Reliability and Life Prediction for Brittle Materials (G. S. White, E. R. Fuller, Jr., and S. W. Freiman)

PART 6: MANUFACTURING
29. Interaction of Materials Selection, Design, and Manufacturing Processes (Ronald A. Kohser)
30. Production Processes and Equipment for Metals (Magd E. Zohdi, William E. Biles, and Dennis B. Webster)
31. Metal Forming, Shaping, and Casting (Magd E. Zohdi, Dennis B. Webster, and William E. Biles)
32. Plastic Parts Processing I (William E. Biles)
33. Plastic Parts Processing II (Dean O. Harper)
34. Composites Fabrication Processes (Michael G. Bader)
35. Advanced Ceramics Processing (Lisa C. Klein)

PART 7: APPLICATIONS AND USES
36. Spacecraft Applications of Advanced Composite Materials (Kevin R. Uleck, Paul J. Biermann, Jack C. Roberts, and Bonny M. Hilditch)
37. Selection of Materials for Biomedical Applications (Michele J. Grimm)
38. Selecting Materials for Medical Products (Sherwin Shang and Lecon Woo)
39. Materials in Electronic Packaging (Warren C. Fackler)
40. Advanced Materials in Sports Equipment (F. H. Froes)
41. Materials Selection for Wear Resistance (Andrew W. Phelps)
42. Diamond Films (Andrew W. Phelps)
43. Advanced Materials in Telecommunications (Glen R. Kowach and Ainissa G. Ramirez)
44. Using Composites (Hans J. Borstell)
45. Composites in Construction (Ayman S. Mosallam)
46. Design for Manufacture and Assembly with Plastics (James A. Harvey)
INDEX

To purchase this product, please visit:
https://www.wileyindia.com/handbook-of-materials-selection.html

Scan to buy