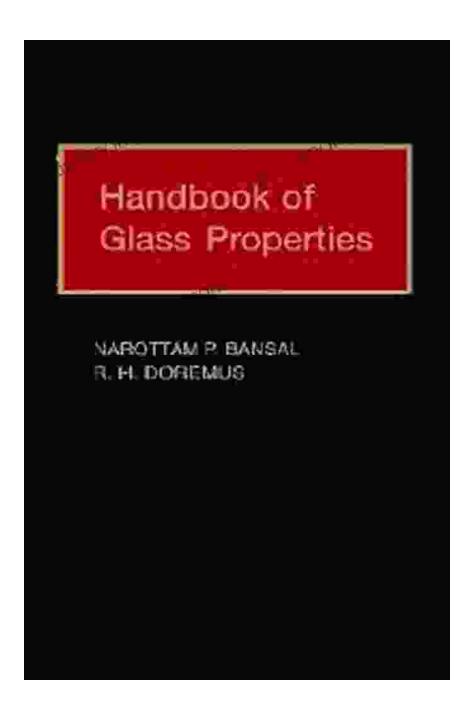
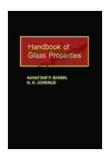
Unveiling the Handbook of Glass Properties: An Invaluable Resource for Glass Professionals



Handbook of Glass Properties (Academic Press Handbook Series) by Narottam P. Bansal





Language : English
File size : 6523 KB
Text-to-Speech : Enabled
Screen Reader : Supported
Print length : 680 pages



Glass, with its unique combination of transparency, strength, and durability, plays a pivotal role in countless industries, ranging from optics and electronics to construction and medicine. Understanding the properties of glass is essential for harnessing its full potential and ensuring its effective application. The *Handbook of Glass Properties*, published by Academic Press, serves as the definitive reference for glass professionals, providing comprehensive coverage of the fundamental properties of glass, their measurement techniques, and their practical applications.

Unveiling the Book's Structure and Content

The *Handbook of Glass Properties* is a meticulously organized and comprehensive resource. Divided into six sections, it encompasses every aspect of glass properties, from the basics to advanced topics:

Section 1: Fundamentals

This section lays the foundation by introducing the fundamental concepts of glass science, including the structure of glass, its thermodynamics, and its mechanical properties.

Section 2: Thermal Properties

The second section explores the thermal properties of glass, such as thermal expansion, conductivity, and specific heat capacity. Understanding these properties is critical for designing glass components that can withstand extreme temperature fluctuations.

Section 3: Optical Properties

The optical properties of glass, including refractive index, transmission, and absorption, are covered in-depth in Section 3. These properties are fundamental to the development of optical devices like lenses, prisms, and optical fibers.

Section 4: Mechanical Properties

Section 4 delves into the mechanical properties of glass, such as strength, hardness, and fracture toughness. These properties determine the suitability of glass for applications involving mechanical stress.

Section 5: Electrical Properties

The electrical properties of glass, including electrical conductivity, dielectric constant, and breakdown strength, are explored in Section 5. Knowledge of these properties is essential for electrical applications and the development of insulating materials.

Section 6: Chemical Properties

The final section covers the chemical properties of glass, including its chemical resistance, ion exchange, and leaching. Understanding these properties is crucial for applications involving chemical processing and the development of chemically stable glasses.

Unique Features of the Handbook

The *Handbook of Glass Properties* stands out as an exceptional resource due to its unique features:

1. Comprehensive Coverage:

The handbook offers an unparalleled level of coverage, encompassing all aspects of glass properties, from the fundamentals to advanced topics.

2. Authoritative Content:

The book is authored by a team of renowned experts from academia and industry, ensuring the accuracy and reliability of the information provided.

3. Practical Applications:

The handbook emphasizes the practical applications of glass properties, providing guidance on how to select the right glass material for specific applications.

4. Measurement Techniques:

Detailed descriptions of measurement techniques for each property are included, enabling readers to perform accurate and reliable measurements.

5. Extensive Tables and Figures:

The handbook is richly illustrated with tables, figures, and graphs that summarize and clarify the presented information.

Target Audience

The *Handbook of Glass Properties* is an invaluable resource for professionals in the glass industry, including:

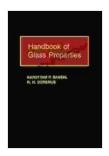
* Glass scientists and engineers * Materials scientists * Optical engineers * Mechanical engineers * Electrical engineers * Chemical engineers * Researchers and students specializing in glass science and technology

The *Handbook of Glass Properties* is the ultimate reference for glass professionals, providing a comprehensive understanding of the fundamental properties of glass, their measurement techniques, and their practical applications. It empowers readers with the knowledge and tools to harness the full potential of glass and drive innovation in various industries. Whether you are a seasoned expert or a budding enthusiast, the *Handbook of Glass Properties* is an indispensable addition to your bookshelf, offering a wealth of knowledge and insights to advance your understanding of the fascinating world of glass.

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★ ★ ★ ★ 5 out of 5

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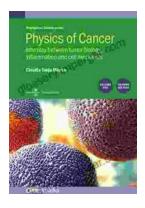
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