

Surface treatment of materials for adhesive bonding / Sina Ebnesajjad

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Abstrak

This book is a unique source of surface preparation principles and techniques for plastics, thermosets, elastomers, ceramics and metals bonding. With emphasis on the practical, it draws together the technical principles of surface science and surface treatments technologies to enable practitioners to improve existing surface preparation processes to improve adhesion and, as a result, enhance product life.

This book describes and illustrates the surface preparations and operations that must be applied to a surface before acceptable adhesive bonding is achieved. It is meant to be an exhaustive overview, including more detailed explanation where necessary, in a continuous and logical progression.

The book provides a necessary grounding in the science and practice of adhesion, without which adequate surface preparation is impossible. Surface characterization techniques are included, as is an up-to-date assessment of existing surface treatment technologies such as Atmospheric Plasma, Degreasing, Grit blasting, laser ablation and more. Fundamental material considerations are prioritised over specific applications, making this book relevant to all industries using adhesives, such as medical, automotive, aerospace, packaging and electronics.

This second edition represents a full and detailed update, with all major developments in the field included and three chapters added to cover ceramic surface treatment, plasma treatment of non-metallic materials, and the effect of additives on surface properties of plastics.