

Plasma Surface Treatment on footwear materials for Improve Adhesive Strength

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Surface modification using plasma has been applied to a variety of materials, such as metal, glass, ceramic, plastic materials and footwear materials. Chemical and physical changes of surface caused by the applied plasma introduce hydrophilic or hydrophobic characteristic to improve adhesion for bonding process, wetting and inking in coating and printing processes. A lot of effects are obtained from the plasma treatment on polymer surface depending upon impact of species from the plasma and surface material of the polymer. The plasmas are generated by different techniques of capacitively coupled dielectric barrier discharges at atmospheric pressure, or capacitive coupling, inductive coupling and microwave excitation at low pressure