

The Right Atmosphere

Atmospheric plasma technology also excels in the pretreatment of PP foils

In order to ensure quality printing and bonding of the most varied films, the surface energy of the films must be increased. Secure adhesion of varnishes, paints or adhesives takes it for granted that the surface energy of the film is higher than the surface tension (mN/m) of the substrate.

"However, especially with use of the corona, there is a danger of double-sided pretreatment which can lead to the film being blocked on the roll. In addition, this method of pretreatment offers only moderate to poor activation. The resulting effects are not particularly stable and

quickly deteriorate during storage", points out Christian Buske, CEO of Plasmatreat GmbH in Steinhagen. Plasmatreat has now developed a modular system for the inline pretreatment of PP films after longitudinal and transverse stretching that, according to Buske, enables a far higher degree of activation apart from nano-fine coating of the film. The system can be arranged in flexible widths and distinguishes itself by its long-term surface effects. Trials at Plasmatreat have demonstrated that values up to over 72 mJ/m² can be achieved with Openair



Christian Buske

plasma pretreatment.

When using other technologies it happens quite often that the activation must be "brushed up" through post-treatment. According to Buske, the films, having undergone Openair plasma pretreatment, can be immediately printed or coated even after several months of storage.

"Also the pretreatment of extremely thin plastic films is extraordinarily uniform and fast. Even at processing speeds of 250 m/min and with intense plasma treatment, the sealability of the film is preserved and not affected", says Buske. "This technique allows in all cases single-sided pretreatment with no danger of blocking the films on the roll while maintaining a consistent high quality of the surface effects." ■

