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Flexibles

News

dyne/cm, coating at 44-54dyne/cm, and lamination at 46-56 dyne/cm. The ability to measure and control the discharge with a high degree of accuracy results in a consistently treated product with minimal waste.

For more than 95% of applications, Corona treatment provides the perfect solution – but in special cases, where the substrate has a complex structure, and downstream processing has specific requirements, the answer will be Plasma grafting. Fundamentally the same as Corona in terms of the electric discharge disrupting the molecule chains on the surface of the substrate, Plasma is more complex in that it is carried out in a controlled environment and not in ambient air.

By enclosing the process in a sealed chamber and introducing Nitrogen, the Oxygen molecules are dispelled to allow a finely controlled process that can be tuned to allow different proportions of Amine, Amide and Imide, depending on the application intended. Take printing for example: with LDPE Corona will cater for solvent, UV and water-based inks up to a level of 55 dyne/cm, and similarly will be sufficient for PET. But PP and BOPP will require Plasma treatment for UV and water-based inks



because Corona will only treat to 47 dyne/cm and 42 dyne/cm respectively.

For lamination, Corona works well up to 47 dyne/cm, but Plasma raises the bar to 57 dyne/cm and Advanced Plasma to 61 dyne/cm. Likewise, for extrusion, where the durability of dyne level is critical, material treated with Corona will decline from 46 dyne/cm when treated to 32 dyne/cm in a matter of months. Figures for Plasma show a drop from 56 dyne/cm to 46 dyne/cm over a similar period, but Advanced Plasma grafting continues to hold a level of 60 dyne/cm for many years.

So, which is better, Corona or Plasma? The answer is they are not directly comparable!

Effectively the only similarity is that they are both surface treatment techniques, but each uses a different method, and while the Corona process relies on the 'free' ambient air, Plasma requires far more investment in the technology and consumables (gas) that are required to make it work. In cost terms, work on a factor of 8 times for Plasma over Corona – so the application needs to be very specialised and profitable to justify the extra investment. But whichever is right for you, Vetaphone technology is at the forefront, where it has always been since Verner Eisby invented surface treatment 68 years ago and built a unique business as market leader.



EcoCorr, first certified biodegradable anticorrosion film to use Cortec's Nano VpCI at EcoCortec's Croatian biofilms plant

Croatia ↑ EcoCortec's plant located in Beli Manastir, Croatia has become the first Cortec powered Nano VpCI to produce the first certified biodegradable anticorrosion film.

EcoCorr Film, a biodegradable, compostable packaging film that provides contact, barrier, and vapour corrosion inhibition, is created in Cortec's laboratories by utilising some of the most contemporary green technologies.

EcoCorr Film is biodegradable, compostable packaging film that provides contact, barrier, and vapour corrosion inhibition. Various formulations containing up to 40% bio-based content are available and can be designed to fit required properties ranging from highly elastic to semi-rigid structures.

When placed in a typical commercial composting environment, EcoCorr film will fully disintegrate within two-three months. The film is extremely elastic and can be used as a complete replacement for non-degradable and inferior blend films. The exact time for films to biodegrade is dependent upon the conditions and activity of the disposal environment (temperature, soil quality, activity of microorganisms).

EcoCorr is patented under US patents 6,028, 160 and 6,156,929. Metal parts packaged in EcoCorr

receive continuous protection against salt, excessive humidity, condensation, moisture, aggressive industrial atmospheres and dissimilar metal corrosion.

EcoCorr will be available across Europe and beyond from EcoCortec's Croatia plant.

In EcoCortec, the Cortec said,it is to promote a circular, sustainable economy aimed at minimizing waste and making the most of resources.



June-July 2019 packaging MEA 43



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