Atmospheric Pressure Plasma Nano-Coated plastic films for high quality printing

NORCOP has developed a wide range of transparent Atmospheric Pressure Plasma-Induced Nano-Coated substrates dedicated to the Printing and Graphic Arts Industries and which are able to push forward your printing performances.

Our nano-coatings are chemically bonded to the surface of the substrate and confer to it Surface Energies varying from 20 to 60 dyne/cm that can be tailored to your specific ink's Surface Tension whether heat or UV cured. Perfect ink spreading is coupled with enhanced adhesion[1] to give reliable and reproducible results which exceed by far performances of corona treatment followed by primer application combinations.

SPECIFICATIONS

- Compatible Substrates: BOPET, BOPP, CPP, LDPE, HDPE, …
- Substrate Thickness Range : 12 - 250µm
- SE[2] Range : 20-60 dyne/cm
- Compatible Formats : Rolls up to 2000mm width or sheets (dimensions upon request)
- Printing Method Compatibility : Gravure, Flexographic, Offset, Screen
- Ink Compatibility : Organic solvent based, water-borne and solvent-less (UV curable) inks
- AP-PECVD[3] Processing Speed : 20 – 70m/min
- Extended shelf-life (6-24 months, depending on coating chemistry)

TAILORED SURFACES

- Excellent Wetting
- Polar Function Selection
- Roughness Control

ENVIRONMENTALLY RESPONSIBLE TECHNOLOGY

- Non-polluting Processes
- Sustainable Materials
- No Solvents, No Waste, No Heat
- Very Low Carbon Footprint

LEGEND

[1] N, O, Si - based chemical functions

[2] Surface Energy

[3] Atmospheric Pressure – Plasma Enhanced Chemical Vapor Deposition

Surface customization offering high quality printing and unique environmental benefits

At NORCOP we have the technology and the know-how to customize the Surface Energy of your preferred plastic film to:

a) Make it compatible with the Surface Tension of your inks of choice

b) Allow chemical bonding with the resins of the ink formulations. (Fig 1)

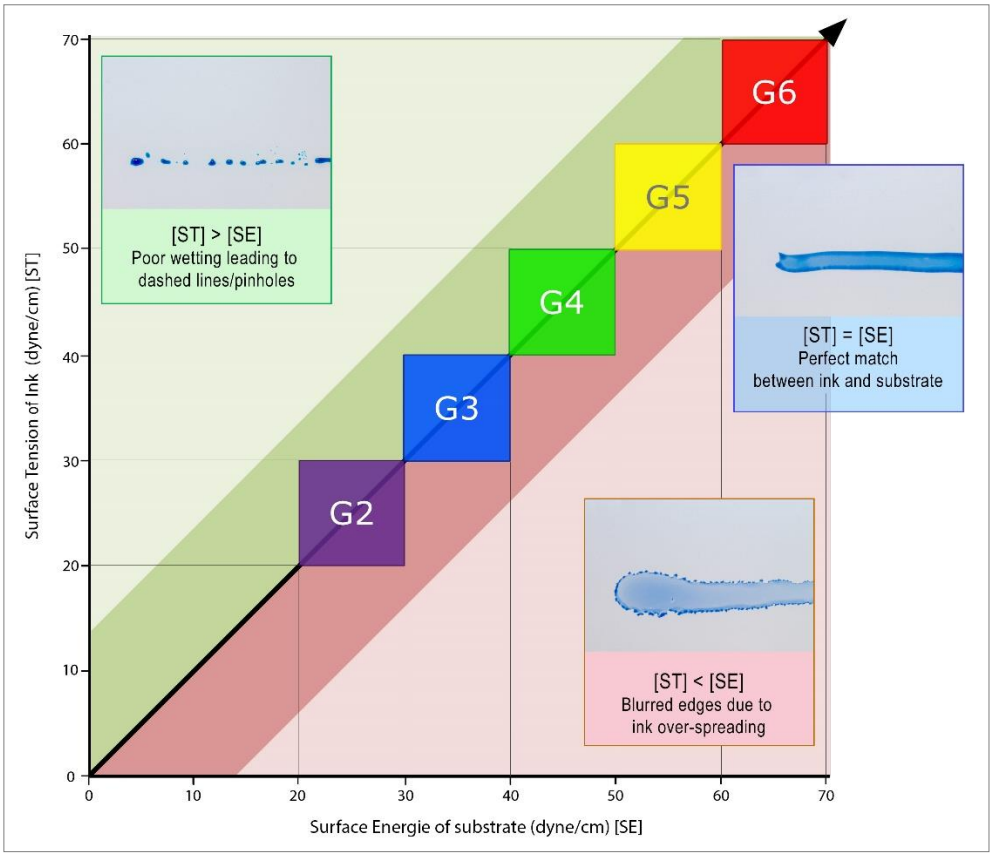
This allows for primer-less printing while keeping the mechanical and optical properties of your substrate unchanged.

Table 1: *Table of surface energy ranges achievable by NORCOP's AP-PECVD nano-coating technology of plastic films.*

Nano-Coating Series		Surface Energy Range (dyne/cm)*
G2	Very Low	20-30
G3	Low	30-40
G4	Medium	40-50
G5	High	50-60
G6	Ultra High	60-70**

* based on contact angle measurements ** wet coating

Figure 1 : *Graph showing the 'Perfect Fit' between ink Surface Tension and substrate Surface Energy achieved by NORCOP's surface customization using our proprietary AP-PECVD technology.*



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