

DELAMINATION OF COATED MATERIALS

Issues and necessary precautions

What are so-called *coated* materials? What is *coating*? And what is the so-called *Corona treatment*? In today's Digital Printing field, there is an increasing amount of materials that are processed in these ways and it is good to know their peculiarities and critical issues. Below we'll provide you with some useful general information to help you better understand these materials and their implications.



ESSENTIAL GLOSSARY

- **POLYOLEFINS** - This is a family of synthetic resins – including several polymers that are very well known to us, such as **polyester** and **polypropylene** – that are characterized by non-porous and chemically inert surfaces with a very low surface tension. To put it simply, all PETs and PPs naturally reject inks, adhesives and many other substances.
- **CORONA TREATMENT** - To make a polyolefin receptive, you must first subject it to this process, which consists of a **high-frequency electrical discharge capable of opening the pores of the resin surface and making it non-resistant to aggression**.
- **COATING** - Immediately after the corona treatment, one or more layers of these compounds are laid down and can anchor to the previously porous surface, making the product printable. **Only a few microns thick, it is the only element capable of holding ink.**



WHAT ABOUT THE ISSUES?

- **THE CHEMICAL ACTION OF THE INK** - all inks on the market have a certain degree of chemical aggression (especially solvent-based ones) capable, in extreme cases, of altering and damaging the structure and stability of the coating.
- **THE QUANTITY OF INK** - The coating is very thin and is therefore able to retain less ink than a naturally absorbent material.
- **HUMIDITY, TEMPERATURE AND AIR PRESSURE** - They can all have a major impact on the evaporation of ink, and therefore, on the side effects it may cause.



RECOMMENDED PRECAUTIONS

- **CALIBRATE THE INK LIMIT** - It is essential to align the material before printing it and establish its correct ink limit, so as not to overload the coating and compromise it.
- **AID DRYING** - Additional ventilation and heat can do wonders to speed up the evaporation of an ink and avoid unnecessary impact on the coating.
- **MAKE SURE EVAPORATION IS COMPLETE** - In this way, all post-printing work may be performed safely, without fear of the coating becoming detached.

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