POWERCOAT® ALIVE

PRINTING GUIDE

APPLICATIONS

Intelligent brochures, invitations, business cards, labels, high-end packaging and all applications connected by RFID NFC. The standard 13.56 MHz NFC is used by the majority of current Android and Windows mobile phones. The communication distance is less than 2 cm. In order for the communication to work, the paper must not be placed on a metal surface. It must also not be immersed in liquid.

The paper is delivered with non-secure coding.
A re-encoding of the microchip is therefore possible. Arjowiggins cannot be held responsible for any re-encoding.

STORAGE AND HANDLING

Please ensure that the paper is already "temperature acclimatised" to its new environment before opening the boxes. It is recommended to keep this paper away from sudden changes in humidity throughout the transfer and printing process. It is also important to not press the microchips on the surface of the paper using force or excess pressure.

In good storage conditions, the electronic circuits can last for over 5 years.

Handling and transportation:

Do not stack more than 200 sheets high; if necessary, insert a piece of cardboard every 200 sheets into the pile when printing. Do not wrap bulk pallet style. Re-use the box after printing for transportation to avoid damage to tags

WORKING ENVIRONMENT CAUTION

In case of unconditioned relative humidity in the workshop a deformation of the paper is likely to be observed. It is preferable to take the sheets out from their box at least 3h before printing and preferably the day before to make it possible to recover the right flatness to ensure a successful print job.

TECHNICAL INFORMATION

Given the electronic circuits embedded into the PowerCoat and Alive papers, special care should be given when printing and processing the product. Please refer to the below instructions to obtain the best results.

PRINTING METHODS

PowerCoat ALIVE is adapted to all types of printing, including offset, digital, screen printing and flexography. A pre-test is recommended for thermographic printing. Embossing and hot foil stamping should be avoided, or else carried out with great care in order to avoid damage to the electronic chips and circuitry.

Offset printing:

We recommend using UV-curing, fully oxidized offset inks or standard inks with a UV varnish, to avoid any problems with set-off due to the increased thickness of the chip. Additionally, avoid stacking the sheets too high as the piled up chips will prevent the sheets from laying perfectly flat. Traditional offset inks or special siccatives for non-absorbent substrates are also possible, but care must be taken to avoid any transfer onto the chips, such as using coarse anti set-off powder, and under colour removal process, lower stack heights, or an acrylic varnish after printing.

For printing with specific inks such as metallics, please consult your usual provider.

Halftones:

For a good printing quality, we recommend setting the halftone at 175.

Screen printing:

U.V. screen printing gives excellent results, as does standard screen printing with vinyl and oven-drying inks. Care must be taken to avoid set-off due to the increased thickness of the chip.

For Digital printing:

Good results are obtained using a HP Indigo, iGen or Nexpress press. However, please check that the machine accepts heavy paper thicknesses for paper with a grade of 435µm. Simplex printing can facilitate the transfer of paper with a heavy thickness.

U.V. Varnish:

To obtain the best results, we recommend a screen printing or offset U.V. varnish.

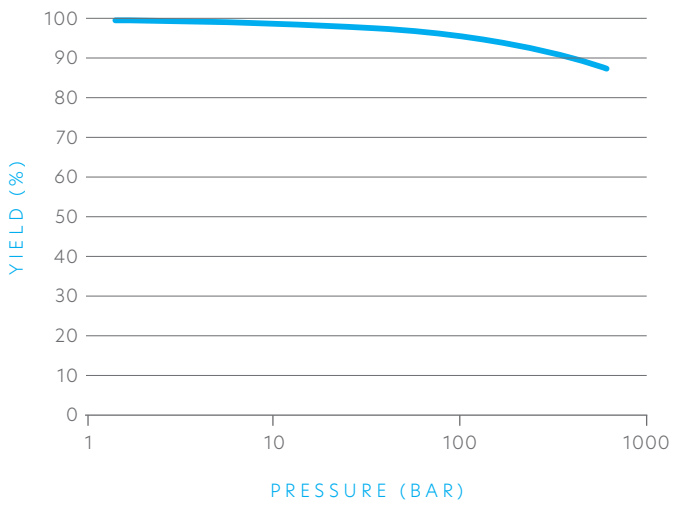
Varnish:

Varnishes can be used to avoid marks or smudging during treatment.

PRESSURE

The chips are sensitive to pressure. If too much pressure is applied on the chip, it could break.

YIELD OF THE CHIPS (RATIO OF WORKING CHIPS) vs PRESSURE



Embossing:

PowerCoat ALIVE papers must not be embossed on the antenna or the chip. A pre-test is recommended for embossing outside of these areas.

Hot foil blocking:

PowerCoat ALIVE papers must not be hot stamped on the antenna or the chip. A pre-test is recommended for stamping outside of these areas.

Guillotine work:

Ensure that the holding bar does not fall on the chip.

LAMINATION

PowerCoat ALIVE papers can be easily laminated, however please ensure that the chips are not crushed during lamination.

SCORING AND FOLDING

To avoid any failure in the circuitry, it is imperative to not score or fold along the chip or antenna. To optimise the result of any folds, prior scoring is recommended. Wherever possible, scoring should be made parallel to the paper grain. Any cutting/scoring should always be done with a self-locating matrix system. The scored line must be visible on the outside of the fold (with the raised side facing in).

BINDING, CUTTING, GLUING AND SHAPING

It is possible to bind sheets of PowerCoat ALIVE paper together or with other materials using standard adhesives. As with the other processes, do not apply too much pressure on the chips and cause them damage, particularly when the sheets are bound into pages or the increased thickness of the chips creates bumps on the page. For example, take care with the clamp pressure of the guillotine, by sliding some corrugated card under the clamp. This can help distribute the load and avoid the chips taking all of the pressure of the clamp.

PowerCoat ALIVE sheets can be easily stapled, sewn or bound into a book, as long as the chip and antenna are not placed along an edge. When using spiral binding, ensure that the tools are sharp enough. Using round perforations is more effective.

OFFICE COMPATIBILITY

PowerCoat ALIVE papers can be used with inkjet or laser printers, as long as they accept the thickness of the paper.

For further clarification, please contact us at info@powercoatpaper.com