

## METALVAC LABELS FOR BEER

The application of metallized paper for labels is a highly technical process. Generally the following steps are required before selecting a Metalvac product:

- ✧ Exact identification of the application, printing method and other requirements of the printer/end user of the label
- ✧ Laboratory and print tests
- ✧ Label tests and authorization from the end user, in the majority of cases breweries.

After use, beer bottles are collected and returned to the brewery for re-use. This is especially the case in the restaurant and hotel sectors.

Re-use involves cleaning and disinfecting the bottles so that they can be filled again and the newly bottled product consumed without any health risks.

The bottles are washed in bottle washers placed in front of filler units. The washers are large tanks filled with 75-80°C water mixed with NaOH (sodium hydroxide or caustic soda) in which the bottles circulate. The solution of caustic soda disinfects the bottles inside and out, wetting and penetrating the label until it reaches the glue and dissolves it, causing the label to peel off.

This means that labels for beer bottles must be made with raw materials that meet a series of specific requirements: that they peel off and not remain on the bottle, that the paper not disintegrate or dirty the washing water, and that the ink not stain the water tank. The technical parameters that need to be kept in mind are:

- The paper's moisture-resistance
- Ink retention
- Peeling time
- Embossing



### Moisture-resistance

In the case of returnable bottles, the substrate used in the manufacturing of metallized paper is subjected to melamine treatment so that the paper does not disintegrate in the soda bath.

Frequently, labels intended for non-reusable glass are also WS. This is done so that the label will be water-resistant in the event that the bottles are placed in cold or humid environments (ice-cube makers, freezers, refrigerators...). This prevents the paper fibre from coming apart and the paper from tearing.

### **Ink retention**

To prevent ink from dissolving in the bath and dirtying it (this would entail having to change the water of the bath more frequently, which would imply higher costs, more waste management, and a higher risk of contamination in the bottles), metallized paper is manufactured with lacquers that ensure the retention of the ink. This means that the ink remains joined to the paper. As such, the ink must also be resistant to the soda.

### **Peeling time**

The label, complete and with ink, must come unstuck while the bottles are being washed. If this does not occur, one runs the risk of allowing a bottle with an old label to enter the filler line, causing machine stoppage and/or a poorly labeled product. Labels that have come unstuck are periodically removed from the bath automatically.

### **Embossing metallized labels**

Due to its layers of varnish, printed metallized paper is a highly impermeable substrate. To foster the penetration of water and the peeling off of the label, it is recommended that the paper or the label be embossed. Embossing is a form of engraving applied to paper for aesthetic purposes, but is also desirable for this process given that it breaks up the layers of varnish and ink, creating holes for the soda to pass through. Additionally, embossing facilitates the labeling process.

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