



Gold inks for web offset heatset printing

Application

Metallic-effect printing inks open up great possibilities for the design of printwork in web offset heatset, too. Gold has always been the epitome of beauty and luxury, so it is only understandable that civilised man has forever been trying to imitate these effects.

Gold effects are created using pigments based on brass (= a copper-zinc alloy). Misleadingly, reference is often made to bronze shades, which would have to contain an alloy of copper and tin. The different shades are an expression of the various proportions of the constituents in the alloy, such as

ROLLO-THERM® Rich pale gold 46 HG 0200

Alternatively, aluminium-based pigments can be used in combination with suitable coloured pigments, the proportion of the latter being responsible for the respective hue obtained (reddish-yellowish). The metallic character of this variant can only be described as very intensive, even if it isn't comparable with the brass shades.

Converting

The best metallic effect is achieved on coated substrates that have a uniform, smooth surface. In view of the highly pigmented and extremely opaque systems, it is neither recommendable nor necessary to try to enhance the effect through excessive inking. As a rule, this only leads to printing problems such as piling, inadequate smudge resistance, increased emulsification and ink flying. It has proven to be best when the gold ink is not printed from the final inking unit, especially when printing solids. Smoothing the print by means of an additional rubber blanket does bring advantages as regards producing an uninterrupted coating.

Metallic pigments that contain copper are particularly susceptible to corrosion. And this fact must be taken into consideration by printmen. For this reason, the pH of the fount solution should be no lower than 5.5. In addition, the amount of fount solution applied should be kept to a minimum in order – especially when ink consumption is low – to avoid over-emulsification and poor ink coating that goes hand in hand with this.

Gold inks on an aluminium base offer better printability than those that contain ground brass because the proportion of relatively coarse and less easily wettable metallic pigment can be kept far lower. The colour shades that can be achieved with aluminium-based gold inks can not be compared with those obtained from brass-based inks because the metallic character of the aluminium particles (whitish silver) – which necessarily have to be on the surface of the ink if the metallic effect is to be good – differs from that of the brass particles. The “brightness” of conventional gold inks, therefore, can not be achieved to anywhere near the same degree.

Surface finishing

When conducting subsequent surface-finishing procedures, such as UV varnishing or film laminating, on dried metal-pigmented heatset inks, problems are repeatedly experienced as regards adhesion. The cause of these problems are stabilisers and lubricants added during the production process, which adhere to the surface of the metallic pigments. The amount of these additives on the dried ink surface fluctuates depending on the pigment concentration, the absorbency of the

substrate and the quantity of ink applied. Consequently, we recommend that you examine the varnish-acceptance and adhesion characteristics between the ink film and the surface finish thoroughly in the run-up to the print job.

Shelf life

The metallic gloss of the inks gradually decreases over time due to oxidation of the metallic particles.

A shelf life of 6 months should not be exceeded.

Classification

Code per German law on hazardous substances (GefStoffV): None

Safety Data Sheet available on request.

How supplied

10-kg plastic tank

25-kg plastic tank

Contact addresses for advice and further information: www.hubergroup.de

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