

ACTEGA Kelstar Technical Bulletin

UV Coatings Used with Food Packaging

As the popularity of UV coatings for the folding carton industry increases, so does the opportunity to use UV for food cartons and packaging. Historically, some of the more common raw materials used in UV formulations have had such strong odors that it prohibited the use of UV in this application. These raw materials were causing such problems as off-taste, and off-odor in everything from chocolates to perfumes.

But the demand for large scale commercialization of food and aseptic packaging has promoted the development of deodorized raw materials and improved initiator systems which do not remain fugitive in the cured UV film. These improvements have greatly reduced the potential for odors associated with the cured film.

Despite these improvements in the raw materials, there still remains the issue of process control. In order to take advantage of the improvements in odor elimination with these high performance raw materials, the degree to which a UV film should be cured must be understood, maintained and monitored from job to job and within any individual run.

Some factors that can affect degree of cure include substrate porosity, ink density, dryness of ink, (when applicable) coating volume, changes in line speed and condition of curing equipment (lamps and reflectors). Therefore, the successful control of odor with the UV coated package begins with tight process control of the aforementioned variables.

Because it is not possible to guarantee the complete elimination of odor with the UV coating process, ACTEGA Kelstar recommends the use of an effective barrier between the food and the carton or packaging, and completely sealing the food from any potential odors associated with both the printing and coating process. This barrier used in conjunction with a low-odor, high performance UV formulation will help yield the most desirable package.

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