Cork Tech TalkNews

Manufacturers of Waterbase, UV+EB Curable Coatings, Varnishes and Adhesives

04/00

BAGS, MULTIWALL & OTHERS MOVE TO HIGH END GRAPHICS

All forms of packaging are being asked to perform as a selling format in todays' display oriented retailing. Bags, as we know them, are not being excluded. It used to be that bags were no more than a conveyance to package bulk product and get it to the point of consumption. Except for industrially con-sumed products such as construction, food processing and agricultural, this is no longer the case and even some of these are carrying selling graphics. You and I as consumers are faced with POP (point-of-purchase) retailing of products including fertilizers, pet foods, salt, dirt, cat litter, where the package does the selling. In these cases multiwall and other bags are presenting us as consumers with a so called high end graphics selling message. Even simpler bags have evolved into gift bags displaying eye appealing graphic designs and gloss.

Gloss sells, and we find high gloss overprint effects being specified via aqueous, solvent, UV/EB coatings or varnish application.

Gloss as well as printing is enhanced by substrate smoothness, color, brightness, gloss, holdout, quality of printing and overprint/coating application.

Multiwall bags or shipping sacks are constructed of multiple layers (3 to 6) or plies. Bags that carry lighter net weight totals of product typically will be constructed of fewer plies. Major substrates will be kraft (40-70# shipping sack paper) in the instance of industrial & construction packaging, while most consumer products will feature an outer layer of (more suitable for printing & coating) bleached white kraft, SBS or clay coated papers. Inner plies of bags can be treated with materials to provide oil, grease, or water resistance, MVTR, flame, insect retardance, oxygen and other gas barriers, etc. Various coatings, extrusions or film layers of PE, PP, silicone, fluorocarbon, PVDC, PET, metallized films, and wax are used to obtain these properties. Coatings or films are applied to or sandwiched between inner plies of the multiwall bag construction.

Paper bag substrates must exhibit properties that allow folding, scoring, bending, and perforating, without tearing, cracking or bursting. Adhesive acceptance also requires paper with specified, uniform moisture properties. High quality printing demands that the outer paper ply be very uniform in moisture, weight and thickness.

Materials other than paper also vie for the bag market with bag structures that are plastic mono films, or co-extrusions, appearing more and more. These plastic constructions from very light gauge to heavier gauges are designed to meet necessary property requirements such as tensile strength, coefficient of friction, tear, burst, opacity, uniformity of weight and thickness, as well as barrier. Typically, film clarity, color and material strength can be tailored to the specific application.

There are many varieties of bag formation and constructions which include, pinch bottom gusseted, flat tube, centerfold, and multifold types. Opening features can include sewn open mouth, pasted valve, and on plastic bags, zipper & tape reclosures. New designs continually evolve to complement traditional ones.

The printing process most widely used today is flexo. Both solvent & water based inks are used as well as UV. EB can also be considered a print/coating process viable to the bag industry. Critical to the use of low viscosity flexo inks and varnishes is holdout, smoothness and uniform moisture in paper print substrates. These characteristics allow low viscosity flexo inks and varnishes to be applied effectively to achieve high quality graphics and overprint gloss.

Plastic substrates must exhibit sufficiently high surface energy (measured in dynes/cm) in order to accept liquid flexo inks and varnishes. Without proper molecular attraction (bond sites), liquids will fail to wet the surface producing defects in coverage and adhesion. In fast moving high speed printing processes, it is essential that the surface energy (attraction of a liquid) of the substrate significantly exceed the surface tension (resistance to spreading) of the liquid inks and vanishes to be applied. Some substrates may be primed with coatings to increase the substrates surface energy and its ability to accept inks and coatings. Both flame, chemical and corona surface treatment systems have been developed to treat and increase the surface energy of plastic substrates.

Aqueous and UV/EB inks, varnishes, coatings and adhesives require substrate surfaces to have even higher treatment levels than solvent systems, which wet surfaces more effectively. Typically, substrate treatment levels of 40 dynes/cm or higher are required for effective print/varnish or laminating operations.

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Large bags and even some medium sized bags require non-skid effects to be imparted in order that bags can be effectively handled in palletizing and in displaying for retail, stacked one on top of the other. Large weighty bags can become dangerous if they were to act like giant playing cards sliding easily against one another when stacked.

Non-slid properties can be provided through the overprint application of anti-skid coatings and varnishes. These are available in solvent, aqueous, UV and EB coating/varnish systems. High slide angle non-skid properties, with slide angles in the 31-38∞ range, can be provided by Cork aqueous and UV/EB varnishes and coatings. Lower slide angles to meet other specifications can also be provided.

Gloss is more and more a requirement of today's demands for high end, high quality, retail oriented bag graphics. High gloss is being achieved though the use of low VOC, non-polluting aqueous and UV/EB coatings & varnishes, solvent systems and film lamination.

Today's high end graphic bag products continue to grow in both appeal and volume.

Today's bags offer better value than ever in terms of packaged product protection, utility of use and the ability to market product effectively in retail graphically oriented consumer marketing.

LOOK TO CORK! ..... for coatings & varnishes to meet your non-skid overprint requirements.

LOOK TO CORK! ..... for high gloss coatings & varnishes to enhance high end graphics.

LOOK TO CORK! ..... for all of your aqueous, UV and EB bag coating & varnishing requirements.