polymer blend comprising a thermoplastic polyurethane and a cellulose ester, and an ink layer adjacent to at least one surface of the film.

In one aspect, there is provided an article comprising

a film layer, the film layer comprising a polymer blend comprising a thermoplastic polyurethane and a cellulose ester; and

an ink layer adjacent to at least one surface of the film; wherein the film layer is hot melt processable.

In some embodiments, the cellulose ester is a cellulose acetate butyrate. In some embodiments, the cellulose ester is a cellulose acetate propionate.

The film layer may additionally comprise polyester, a styrene copolymer (for example a styrene acrylonitrile copolymer), a plasticizer, a poly(meth)acrylate or all these materials. In some embodiments, the film layer is hot melt processable.

An ink receptive layer may be present on the surface of the film layer between the film layer and the ink layer.

In some embodiments, the ink layer is a piezo ink-jet ink, an ultraviolet curable ink, a solvent ink, or a latex ink.

The film layer may comprise a UV stabilizer or a pigment.

In some embodiments, the article has an adhesive layer adjacent the film layer opposite the ink layer. The adhesive layer may be a structured adhesive layer.

Description

Articles of the present invention comprise a film, and an ink layer on one major surface of the film.

The film according to the invention comprises a polymer blend. The blend comprises thermoplastic polyurethane and a cellulose ester. The cellulose ester may be, for example, cellulose acetate butyrate or a cellulose acetate propionate. Generally, the film is hot melt processable. Other materials may additionally be blended into the polymer blend. For example, a poly(meth)acrylate may be added to the polymer blend.

Thermoplastic polyurethane materials are blended with the cellulose ester. The thermoplastic polyurethane may be aliphatic or aromatic. Useful thermoplastic polyurethanes

include, for example, those sold under the tradename ESTANE, for example ESTANE 58213, ESTANE 58277, ESTANE ALR CL87A TPU, and ESTANE ALR E60D TPU, from Lubrizol Advanced Materials, Inc., Cleveland, Ohio; KRYSTALGRAN PN3429-218 and KRYSTALGRAN PN03-217 from Huntsman Polyurethanes (an international business unit of Huntsman International LLC), The Woodlands, Texas; and TEXIN 3044 and TEXIN 3075 from Bayer Corporation, Pittsburgh, Pennsylvania.