FACE FIRST

Thanks to Covid-19, face mask wearing has become commonplace. Amid myriad options for customisation, ink choice and compliance are crucial for a covering that comes into close contact with skin, warns Jessica Makrinos

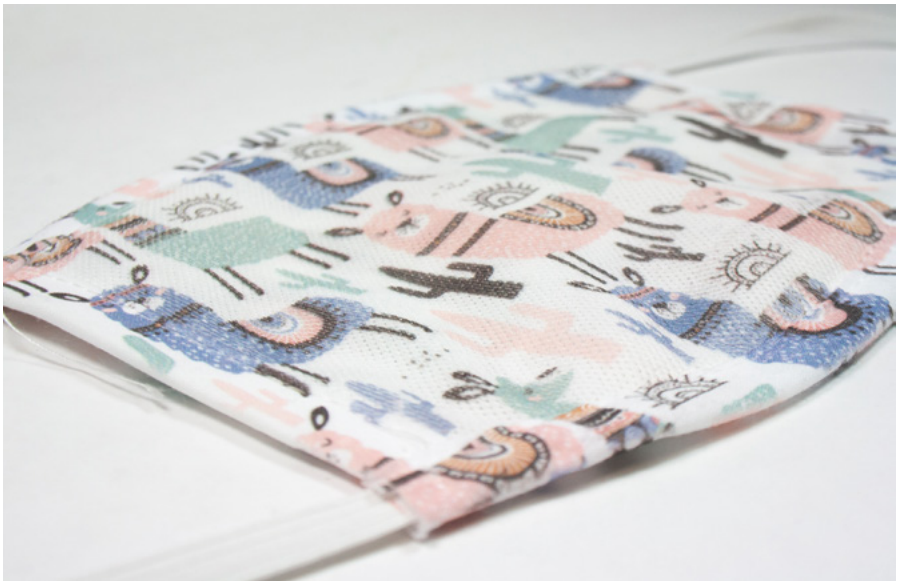
Phone, keys, wallet, mask. It's a new world we are living in and wearing a mask in public has become the norm. With a Covid-19 vaccine now being rolled out, there is hope on the horizon. However, experts say that for the foreseeable future safety protocols still need to be strictly adhered to in order to keep communities safe.

According to a poll from the National Geographic, 74% of people claim they 'always' wear a mask or facial covering, an increase of 13% since August; 92% of people surveyed said they sometimes, often or always wear one.

With the global face mask market expected to exceed $50 billion by 2025, the segment of the printing industry that can meet this demand will also see dramatic growth. Most printing businesses have already begun to adapt their operations to address this market opportunity.

FACING UP TO DEMAND

A face mask is defined by the US Food and Drug Administration as a form of 'personal protective equipment that is used to protect the wearer from airborne particles and from liquid contaminating the face,' commonly in the form of N95 respirators or surgical masks worn by healthcare professionals. Facial coverings are used by the general public and are typically made of polyester or cotton.



Example of inkjet printing on face masks

"Since face masks and coverings come into close contact with skin, guidelines and restrictions are extremely important"

With masks becoming a routine of daily life, many businesses have taken this opportunity to showcase logos, pop culture references and unique designs. For customised face masks and coverings, there are three primary forms of printing: pad printing, digital inkjet printing and sublimation.

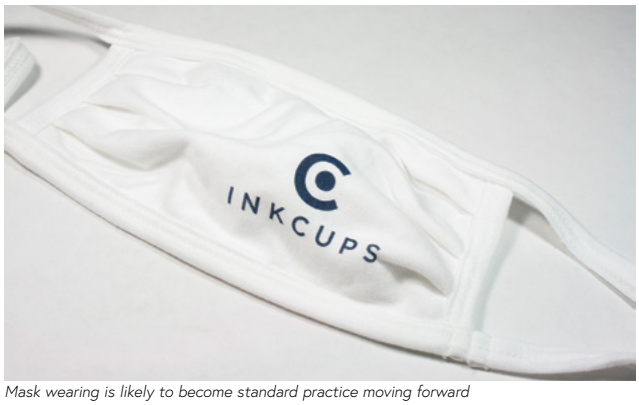
Pad printing on face masks

PAD PRINTING

Pad printing is the most flexible printing method of the three. This process enables a company to quickly reproduce one or two colours with images up to 140mm (5.5ins) in diameter. Additionally, there are many inks and possible combinations of hardeners and solvents that will allow a pad print to adhere to practically any substrate from cotton to polyester. Most of these machines are capable of printing roughly 1,200 masks per hour at less than a penny per piece.

DIGITAL PRINTING

Digital or inkjet printing technology is best utilised for full-colour, full-coverage high-quality graphics. Capable of printing on both face masks and facial coverings, UV flatbed printers are ideal for printing large volumes of face coverings simultaneously with a high range of customisation, which lowers production costs. The best applications for this printing method are N95 or surgical masks, as these are typically made out of non-woven fabric and inkjets cannot print on cotton or similar materials.



Mask wearing is likely to become standard practice moving forward

SUBLIMATION

Sublimation is another option for full-colour prints on face masks and coverings; however, it is limited to polyester masks. With sublimation, a special polyester-coated paper is printed with the graphic. Then, the paper is placed on the product and heated to a very high temperature to adhere to the fabric. Because of its more labour-intensive manual workflow, sublimation is a better option for smaller companies that are not printing at a high volume. Sublimation-based heat press machines are available for practically any size business and the consumables are relatively inexpensive.

THE RIGHT INK

While each of these printing options has its benefits and limitations, the ink is an important component to ensure optimal product quality. Properties to look for in any kind of ink for face masks include compliance standards and adhesion. For example, if the UV ink is not flexible in nature then it may crack and stretch when pulled. With pad printing, if the correct ink is not chosen, it may

"The global face mask market is expected to exceed $50 billion by 2025"

come off easily in the wash or it could smudge while printing. For sublimation, not enough heat will cause graphics to peel away.

Aside from adhesion, ink compliance is the most important factor. Since face masks and coverings come into close contact with skin, the same guidelines and restrictions for tagless printing apply here as well. Guidelines set by standards, such as Eco Passport by Oeko-Tex NAMSA Skin Irritation Study, are extremely important.

As society continues to adapt to this new way of life, mask wearing is likely to become standard practice moving forward. Direct-to-mask printers can provide accurate reproduction, fast throughput, and enable printers to add a spark of creativity and originality. ■

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