

# Mottling of Vinyl Films

The effects, and how it can be removed



## WHAT IS MOTTLING?

Flexibility in vinyl film is accomplished with the addition of plasticisers. The plasticisers soften the film making it pliable but also allow the film to become mottled by pressure. Mottling is an inherent feature of soft films and is a temporary characteristic of the finish.

## THE VISIBLE EFFECTS ON VINYL FILMS

Mottling of vinyl films is caused when pressure of the surface onto the film is too high. The pressure is unlikely to be uniform, therefore the appearance will be uneven, although there will be particular patterns that occur depending on the type of product.

During processing and storage of vinyl film, care must be taken to minimise uneven or high pressure. When high pressure is exerted on the surface of these products they can become embossed and take on a mottled appearance. This usually occurs when the film is rolled, and it is more defined in the centre of the rolls due to the weight increase as the roll becomes bigger.

A narrow band extending across the web which repeats itself every seven to fifteen inches, is caused from storage of a roll on its side outside of the supporting box. The pressure on the bottom of the roll where it rests on the shelf will telegraph all the way to the core, especially in full large rolls. If a roll is used repeatedly and returned to the shelf in a different position the bands will be multiplied.

Ensure rolls are stored on ends or suspended to avoid this issue.

## MOTTLING CONTRAST BETWEEN COLOURS

As mottling is a function of the plasticiser level and softness of the film, it will be almost identical no matter what colour or surface finish is involved. Although darker colours show mottling more, Matt finishes and lighter colours can still be susceptible even though it doesn't show as much.

## REMOVAL OF MOTTLING

Except in severe cases, mottling is easily removed and will fade and disappear within a short period of time. To aid this process, loosen the product roll and leave it for a couple of days in a warm room or a couple of hours in sunshine.

Alternatively, for a quicker result, a couple of minutes under a heat gun will remove the mottling effect or appearance of dull material this can be done pre or post application. Once the signs of mottling are removed it should not re-appear if then stored correctly.

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