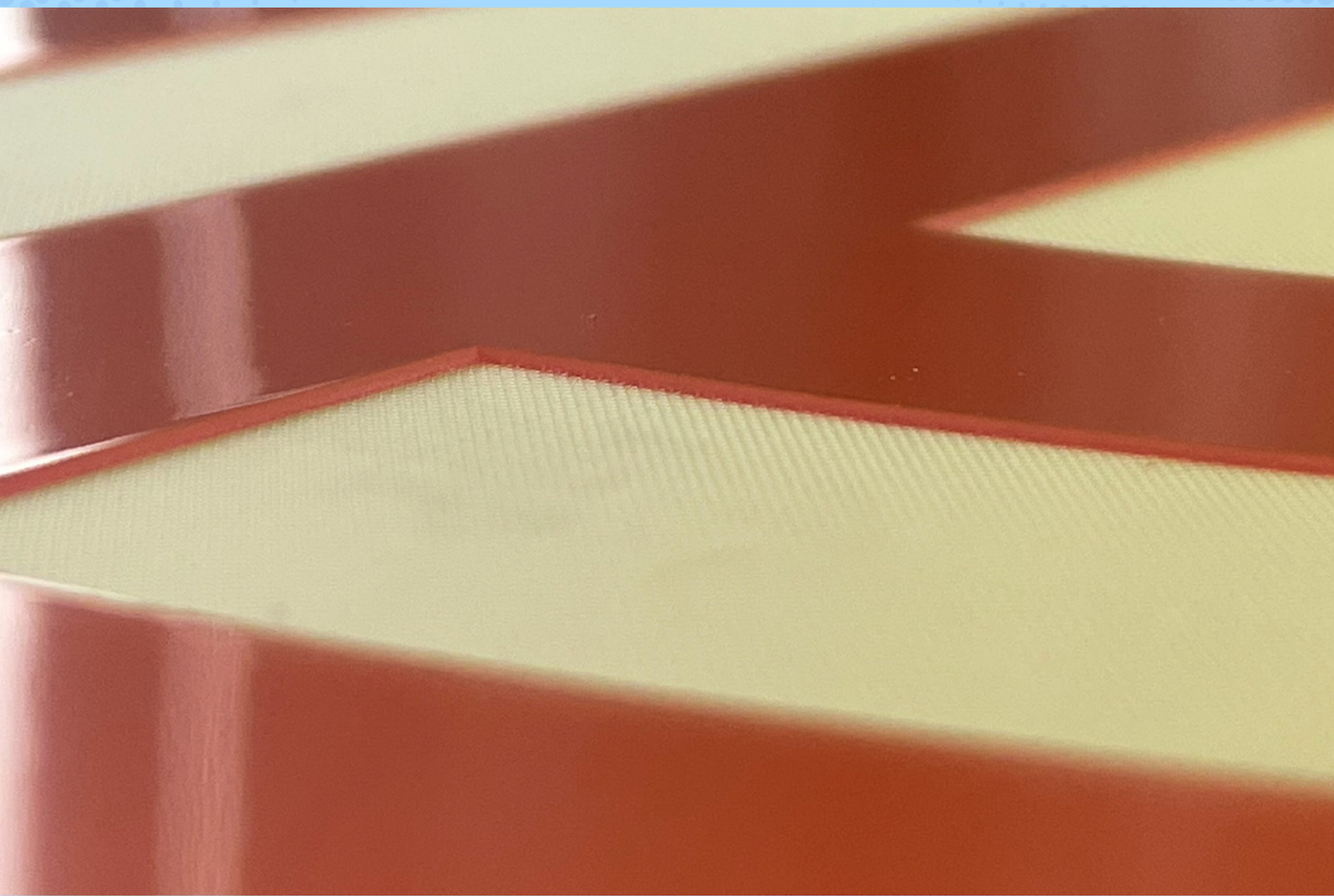
JONES BROTHERS
PRINTECHNOLOGY

# High Density Screen Printing on Garments



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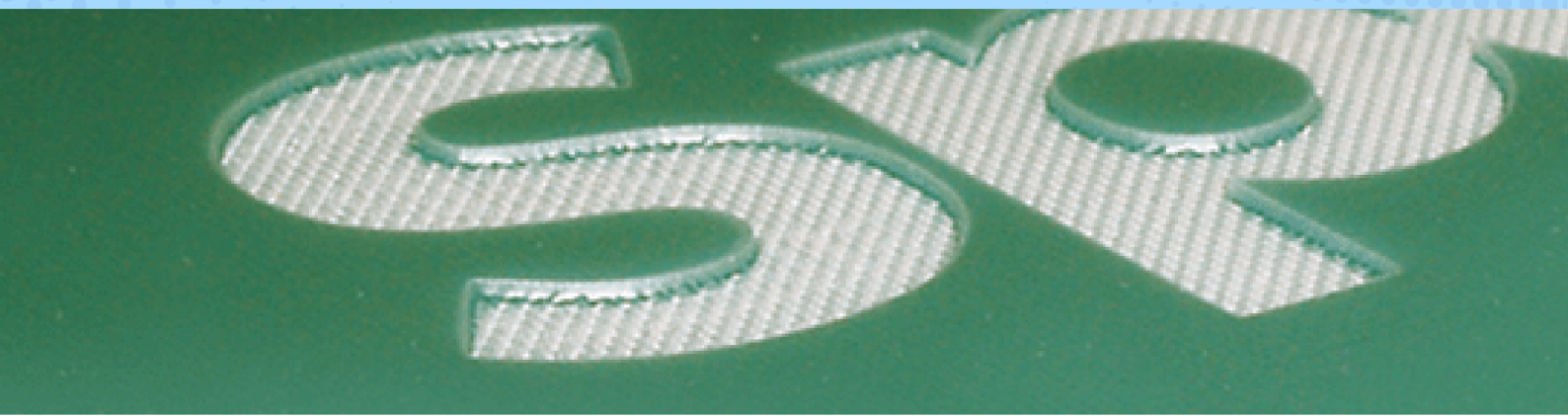

Following on from our last blog post on puff screen printing, we're going to dive into high density (HD) screen printing this week. We've noticed the rise in popularity for dimensional screen printing on garments lately and this article will help you understand the technical side of HD screen printing.

In the past, we've created and exposed HD screens for our customers. Exposing a HD screen can be extremely technical due to the thickness of the emulsion or film, which adds another layer of complexity to the exposure process.

Here are some techniques and tips to help you achieve the perfect HD print.

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# What is HD screen printing and how do you setup a screen for HD printing?

HD/High square printing is a really cool effect which gives texture, a three-dimensional look and feel, and can also be used in ways to create visual effects like kinetic effects. To complete HD printing, you need to dial in your print parameters to achieve that three-dimensional print with sharp square edges.

Generally completed with plastisol ink as plastisol is, by nature, a very thick ink. In saying this, a high-density plastisol ink is even thicker than normal - the thickness of the plastisol allows it to hold shape for the raised effect.

HD prints are set up by creating an extremely thick stencil, either by coating a screen with emulsion in layers until you reach your desired height - measured in microns, or by using a thick capillary film. When exposing a HD screen, it is extremely important to use a high quality, dense film positive due the large increase in exposure time.

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# Do you require a special type of ink to hold a HD print, or will any ink do?

Yes, you are best to use a 3D standalone ink. These inks are normally thicker and flash faster - as also mentioned in question 1, HD inks are even thicker than normal plastisol inks so that they will hold their body.

We can blend colours as a high density mix here at Jones Brothers with a harder feel using the Avient Infinite FX Sculpture Base, or alternatively we can mix the Avient Infinite FX HD Soft Base to colour for our customers. The HD Soft is also available in premixed Black and White.

If a high density clear is all that you are after, we have the Avient Infinite FX HD Clear 2 or the Infinite FX SE Gel Clear.

Alternatively, these Bases, Clears, and Rutland C3 pigments are available from Jones Brothers.

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# What signs do I need to lookout for when flashing and curing HD prints?

It is very important to have your boards pre heated so that the ink gels well on press after running under the flash cure unit. Your oven shouldn't require any adjustment in temperature, or dwell time.

Note: The final print thickness, if extremely high, may determine a difference in dwell time – ensure to refer to the relevant Technical Data Sheets, and complete cure and stretch tests prior to commencing production.

For the best HD print, you may need to print – flash – print quite a few times to achieve the build-up you desire. HD prints are notoriously difficult to execute and require a lot of testing prior to a production run.

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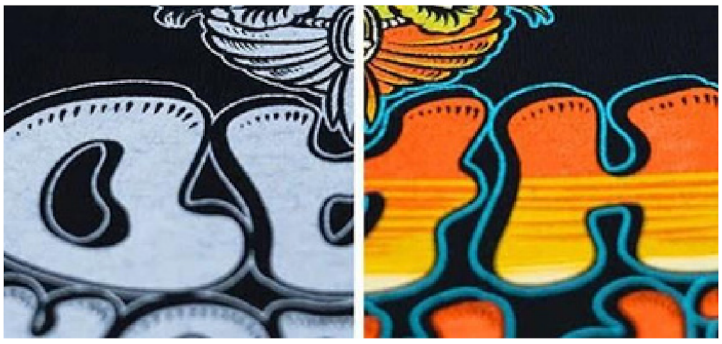
# 3 quick tips:
# Best tips for executing the best HD print on a garment

**Tip 1:** Thoroughly mix your ink before putting it on press for production.

**Tip 2:** Run a high-tension screen with low off contact to avoid graphic bruising.


**Tip 3:** Use a white base with a 54T screen to mat down fabric fibres before your HD screen.



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# Recommended products

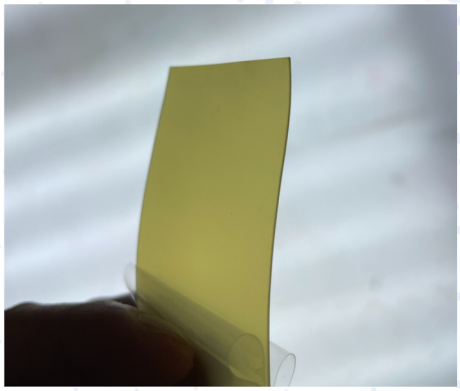
**1. V-Shape Squeegee Rubber**
To reduce the pressure on graphic and gain better control over the print.

The angle is everything when it comes to HD printing. What this does is help stop the ink from bellying out over the print and picking back up coming off the stroke.

**2. Fotec 1845 Solo Emulsion**
Specifically designed for building thickness for HD stencil creation.


**3. Chromaline Super Phat Film**
To quickly create your HD stencil – this will provide you with the best consistent thickness for HD printing.

Chromaline Super Phat Film is available from 100 micro to 700 mic



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