

Saatilene HIBONDplus

Saatilene **HIBONDplus** is a high modulus, low elongation monofilament polyester screen printing fabric with a proprietary surface treatment. Saati's unique surface treatment offers increased printing productivity & cost savings!

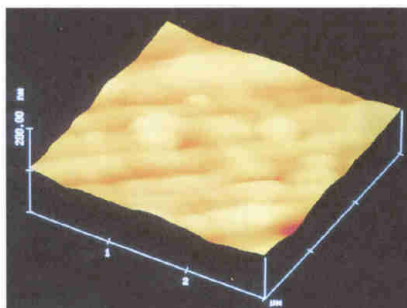
Benefits:

- No degreasing pretreatment step prior to stencil processing.
- Superior stencil adhesion, resulting in less stencil breakdown on press, delivering longer print runs far beyond other conventional treated fabrics.
- In special cases, shorter exposure times for finer detail with no compromise in stencil durability (*halftones, fine lines etc.*)

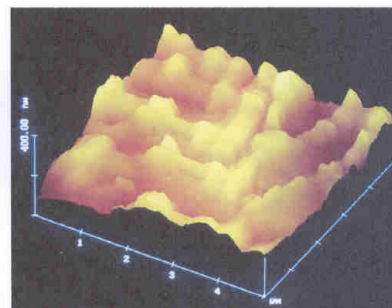
The KEY component of **HIBONDplus** is a proprietary, surface treatment.

"Vacuum Plasma Treatment"

Research on mesh surface modifications conducted at SAATI lead to the selection of the optimized gas environments to be used under vacuum for production of this fabric.



(a)



(b)

Microsection of fabric surface (AFM microphoto) from conventional fabric(a) and Saatilene HIBONDplus (b)

The Vacuum Plasma Process:

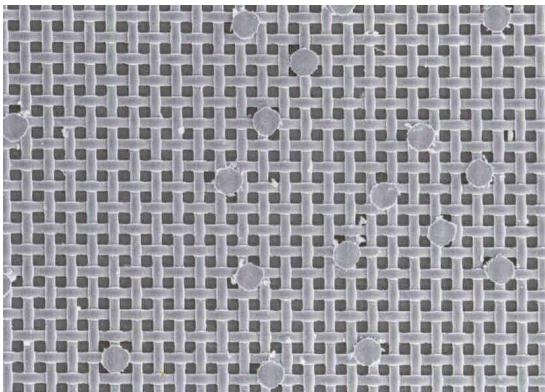
A "plasma" is a partially ionised gas containing ions, atoms and neutral species. In a vacuum environment, those highly reactive particles modify the surface of the fabric creating altered surface energy and "nano etching effect." The surface activation generates *high reactive carboxyl and hydroxyl groups*, responsible for the improved adhesion, while the nano etching process increases the mesh wettability. Selective proprietary gases can be used to modify the fabric surface, making it "super active" and "uniformly" etched. This process is well beyond other *standard* treated mesh offered in the industry.

What makes HIBONDplus so Different?

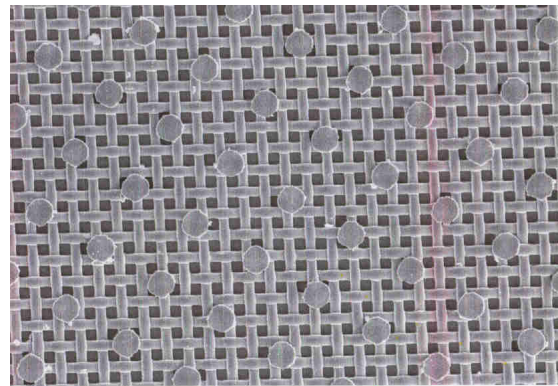
Saati's vacuum plasma treatment is a **LONG LASTING** treatment. The degree of surface modification of HiBONDplus could not happen by any other methods.

Other Advantages:

- Safe under exposure with all emulsion types, Photopolymer, Dual-Cure, Diazo and Capillary Films.
- Excellent performance of virgin fabric
- Excellent for use with abrasive printing conditions, inks and pastes.
- Helps reduce ghost imaging



(a)



(b)

Shadow area with stencil dots missing (a); stencil on Saatilene HIBONDplus (b)

Saatilene HI-R

Saatilene **HI-R** is a high modulus, low elongation monofilament polyester screen printing fabric with a proprietary surface treatment ideal for all traditional applications.

Benefits:

- Ready to use: the degreasing pre-treatment can be eliminated
 - Superior stencil adhesion, resulting in less stencil breakdown on press, delivering longer print runs far beyond other conventional treated fabrics
Better resolution of fine details
 - Improved wettability and optimum stencil surface
-

The Atmospheric Plasma Process:

It is a plasma technology, that is highly innovative in the field of textiles surface treatments. It is based on a DBD electric discharge (Dielectric Barrier Discharge) where an electrical discharge between two electrodes ionizes the air surrounding the electrodes. This kind of process modifies the fabric surface at a nano scale.

What makes HI-R so Different?

The surface modification treatment is **applied to all our fabrics, also for wide widths** (up to 4 meters)

Other Advantages:

- Safe under exposure with all emulsion types, Photopolymer, Dual-Cure, Diazo and Capillary Films
- Holds finer detail with no compromise in stencil durability (*halftones, fine lines etc.*)
- Excellent for use with abrasive printing conditions, inks and pastes
- Good mechanical behavior
- Friendly use
- Helps reduce ghost imaging
- Good anti-static properties

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