

Technical data sheet

SAATILENE HIBONDplus

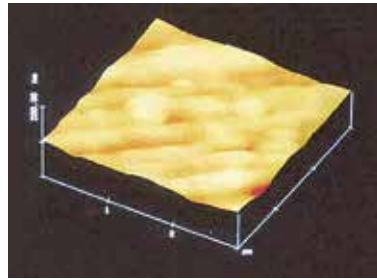
Saatilene HIBONDplus is a high modulus, low elongation monofilament polyester screen printing fabric with a proprietary surface treatment.

Saati's unique surface treatment offers increased printing productivity & cost savings!

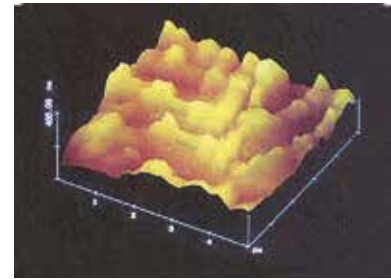
BENEFITS

- 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.)

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



(a)

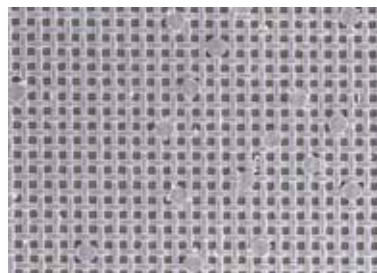


(b)

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
- Good anti-static properties.

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



(a)



(b)

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.

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.

Article	Mesh count		Nominal thread diameter	Mesh opening	Open Area	Fabric thickness	Theoretical ink volume	Specific cross-section	Maximum recommended tension from-to
	n°/cm	n°/inch	µm	µm	%	µm	cm ³ /m ²	mm ² /cm	N/cm
PE AM 43.80 PW	43	110	80	150	43	138	59	0,216	35-37
PE AM 45.70 PW	45	114	70	148	47	115	54	0,173	30-34
PE AM 49.70 PW	49	125	70	130	40	116	46	0,188	30-34
PE AM 51.70 PW	51	130	70	120	38	118	45	0,196	30-35
PE AM 55.64 PW	55	140	64	120	41	105	43	0,177	26-31
PE AM 55.70 PW	55	140	70	105	33	114	38	0,212	30-34
PE AM 62.64 PW	62	158	64	90	32	106	34	0,199	30-34
PE AM 68.55 PW	68	173	55	89	36	89	32	0,161	25-30
PE AM 71.55 PW	71	180	55	80	33	93	31	0,169	25-30
PE AM 77.48 PW	77	196	48	78	36	78	28	0,139	24-26
PE AM 77.55 PW	77	196	55	70	28	90	25	0,183	27-32
PE AM 90.40 PW	90	230	40	68	38	62	24	0,113	20-24
PE AM 90.48 PW	90	230	48	55	27	81	22	0,163	27-29
PE AM 100.40 PW	100	255	40	55	31	63	20	0,126	26-28
PE AM 100.48 PW	100	255	48	40	16	81	13	0,181	30-34
PE AM 110.34 PW	110	280	34	53	35	56	20	0,100	22-24
PE AM 110.40 PW	110	280	40	47	26	64	17	0,138	25-30
PE AM 120.31 PW	120	305	31	53	40	48	19	0,091	21-24
PE AM 120.34 PW	120	305	34	45	29	54	16	0,109	24-26
PE AM 120.40 PW	120	305	40	38	20	67	13	0,151	27-32
PE AM 130.34 PW	130	330	34	39	26	55	14	0,118	24-27
PE AM 140.31 PW	140	355	31	38	28	48	13	0,106	20-22
PE AM 140.34 PW	140	355	34	29	16	56	9	0,127	23-26
PE AM 150.27 PW	150	380	27	35	27	44	12	0,086	25-27
PE AM 150.31 PW	150	380	31	29	20	49	10	0,113	22-24
PE AM 150.34 PW	150	380	34	25	13	56	7	0,136	25-27
PE AM 165.27 PW	165	420	27	30	25	40	10	0,094	24-26
PE AM 165.31 PW	165	420	31	23	17	49	8	0,124	24-26
PE AM 165.34 PW	165	420	34	25	16	66	11	0,150	24-26
PE AM 180.27 PW	180	460	27	24	18	43	8	0,103	18-22
PE AM 180.31 PW	180	460	31	23	17	56	10	0,136	23-27
PE AM 200.31 TW	200	508	31	18	13	60	8	0,151	23-27

The above data are average values measured on piece-good in relaxed state, manufactured with yarns of a perfect nominal diameter (cfr. international standards), under normal hygrometric conditions (20°C=68°F, 65% relative humidity). They are subject to normal variations up to 7% if conditions vary from those stated above. The listed technical specifications, exception made for the thread diameter indicated with its nominal value, are referred to the arithmetic mean value of production samples and are subject to change, in accordance with our policy of continuously improving our products.

The tension tests are realised with TOP 12 series clamp system and appropriate frames at our laboratories.
PW: plain weave (1:1); TW: Twill Weave (1:2 - 2:2)

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 pro-prietary 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.

THE VACUUM PLASMA TREATMENT: The KEY component of HIBONDplus is a proprietary, surface treatment.



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