

product solution

NBC Alpha Series Polyester Monofilament Mesh

Alpha (α) Series polyester monofilament mesh is designed for precision screen printing applications including printed circuit boards, nameplates, glass, graphic, and decal printing. It encompasses a wide range of mesh specifications that utilize NBC's *UX-Screen* or *L-Screen* threads¹, and have been treated with NBC's proprietary *NEWSUPER* treatment as well as their advanced heat-setting process.



L-Screen is a conjugated high modulus polyester thread woven with a super hard polyester core for optimum strength, and a soft polyester sheath for optimum emulsion adhesion. This combination results in a 16% stronger material with significantly lower elongation when compared with solid thread material such as EX Screen. L-Screen is standard on all mesh counts with a thread diameter of 27 and 30 microns, and is also available upon request as a specialty item in *select* mesh counts with a 35 micron thread.

UX-Screen is NBC's super high modulus polyester mesh. This "next generation" mesh possesses all of the features of its predecessor, EX Screen, with the added benefit of an 8% increase in strength. UX-Screen is available in various mesh counts with a thread diameter ranging from 33 to 45 microns.

NEWSUPER is a proprietary combination of NBC's unique chemical and atmospheric plasma, or corona, treatments. It modifies both the surface properties and the structure of the thread at the submicron level. The modified surface properties result in reduced contact with paste/ink particles, allowing for smoother paste/ink transition, and making Alpha mesh ideal for halftone and fine line printing. Additionally, the *NEWSUPER* treatment enables the mesh to cling to the emulsion or capillary film tighter, prolonging screen life, especially in long print runs or when using abrasive paste.

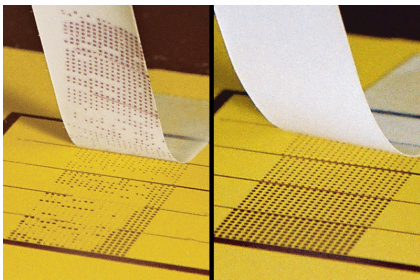
FEATURES

- Smoother paste/ink transition
- Extended screen service life
- Extended exposure latitude
- Minimized screen tension loss
- Improved dimensional accuracy

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PRODUCT IMAGES



Emulsion Adhesion Test Results (Conventional on left, Alpha mesh on right)

ITEM DETAILS

MESH CODE	MESH COUNT /in (±3)	MESH COUNT /cm (±3)	WEAVE TYPE	THREAD DIAMETER μm	MESH THICKNESS μm (45-61")	MESH THICKNESS μm (65"+)	MESH OPENING μm	OPEN AREA (%)	THEORETICAL INK VOLUME cm ² /m ² (45-61")	THEORETICAL INK VOLUME cm ² /m ² (65"+)
L -508 -024 PW	508	200	1:1 PW	24	36±2μm	N/A	24	23	8.3	N/A
L -508 -027 TW	508	200	2:2 TW	27	50±3μm	N/A	22	19	9.7	N/A
L -460 -027 PW	460	180	1:1 PW	27	41±2μm	42±3μm	24	19	7.7	7.9
L -460 -030 TW	460	180	2:2 TW	30	55±3μm	56±4μm	23	17	9.5	N/A
L -420 -027 PW	420	165	1:1 PW	27	40±2μm	41±3μm	30	25	9.8	10.1
L -420 -030 PW	420	165	1:1 PW	30	45±2μm	46±3μm	25	18	8	8.2
UX420 -033 TW	420	165	2:2 TW	33	60±3μm	60±3μm	24	16	9.4	9.4
L -380 -027 PW	380	150	1:1 PW	27	40±2μm	41±3μm	38	32	12.9	13.3
L -380 -030 PW	380	150	1:1 PW	30	45±2μm	46±3μm	33	24	11	11.2
UX380 -033 PW	380	150	1:1 PW	33	48±2μm	49±3μm	27	16	7.8	8
UX380 -035 TW	380	150	2:2 TW	35	64±3μm	64±3μm	30	20	12.9	12.9
L -355 -027 PW	355	140	1:1 PW	27	40±2μm	41±3μm	44	38	15.1	15.5

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L -355 -030 PW	355	140	1:1 PW	30	45±2μm	46±3μm	39	30	13.4	13.7
UX355 -035 PW	355	140	1:1 PW	35	53±2μm	54±3μm	32	19	10.3	10.5
UX355 -035 TW	355	140	2:1 TW	35	61±3μm	61±3μm	34	23	13.8	13.8
L -330 -027 PW	334	131	1:1 PW	27	40±2μm	41±3μm	49	42	16.6	17
L -330 -030 PW	334	131	1:1 PW	30	45±2μm	46±3μm	44	33	15.1	15.4
UX330 -035 PW	330	130	1:1 PW	35	53±2μm	54±3μm	38	24	12.9	13.2
L -315 -027 PW	315	124	1:1 PW	27	40±2μm	41±3μm	54	45	17.9	18.4
L -315 -030 PW	315	124	1:1 PW	30	45±2μm	46±3μm	49	37	16.6	17
L -305 -030 PW	305	120	1:1 PW	30	46±2μm	46±3μm	53	41	18.6	18.6
UX305 -033 PW	305	120	1:1 PW	33	50±2μm	51±3μm	47	32	15.9	16.2
UX305 -035 PW	305	120	1:1 PW	35	53±2μm	54±3μm	45	29	15.5	15.8
UX305 -040 PW	300	118	1:1 PW	40	62±2μm	63±3μm	37	19	11.8	12
UX280 -035 PW	280	110	1:1 PW	35	53±2μm	54±3μm	53	34	18.1	18.4
UX270 -040 PW	270	106	1:1 PW	40	60±2μm	61±3μm	49	27	16.3	16.6
UX255 -035 PW	255	100	1:1 PW	35	53±2μm	54±3μm	64	41	21.9	22.3
UX255 -040 PW	255	100	1:1 PW	40	60±2μm	61±3μm	56	32	19	19.3
EX255 -048 PW	255	100	1:1 PW	48	76±2μm	76±3μm	45	20	15.5	15.5
UX230 -040 PW	230	90	1:1 PW	40	60±2μm	61±3μm	67	37	22.1	22.5
UX230 -045 PW	230	90	1:1 PW	45	68±2μm	69±3μm	60	30	20.1	20.4
EX230 -048 PW	225	88	1:1 PW	48	75±2μm	79±4μm	58	26	19.8	20.9
EX230 -055 TW	225	88	2:1 TW	55	91±4μm	95±5μm	54	23	20.8	21.7
EX230 -071 TW	225	88	3:1 TW	71	139±10μm	N/A	38	11	15.7	N/A

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UX200 -045 PW	200	79	1:1 PW	45	68±2μm	69±3μm	81	41	27.7	28.1
EX200 -048 PW	200	79	1:1 PW	48	75±2μm	79±4μm	75	35	26.2	27.6
EX200 -055 PW	200	79	1:1 PW	55	88±4μm	88±4μm	69	30	26	26
UX180 -045 PW	180	71	1:1 PW	45	70±2μm	72±3μm	95	45	31.7	32.6
EX180 -048 PW	180	71	1:1 PW	48	76±2μm	80±4μm	91	42	31.6	33.3
EX180 -055PW	180	71	1:1 PW	55	88±4μm	88±4μm	85	36	31.9	31.9
EX180 -063 PW	180	71	1:1 PW	63	98±5μm	N/A	71	25	24.8	N/A
EX160 -048 PW	160	63	1:1 PW	48	80±4μm	80±4μm	110	48	38.4	38.4
EX160 -063 PW	160	63	1:1 PW	63	105±5μm	105±5μm	93	34	36	36
EX160 -071 PW	160	63	1:1 PW	71	116±6μm	116±6μm	79	25	28.7	28.7
UX150 -045 PW	150	59	1:1 PW	45	72±2μm	74±4μm	124	54	38.6	39.7
EX150 -048 PW	150	59	1:1 PW	48	76±2μm	80±4μm	120	50	38.2	40.2
EX150 -055 PW	150	59	1:1 PW	55	88±4μm	88±4μm	114	45	39.9	39.9
EX150 -063 PW	150	59	1:1 PW	63	105±5μm	105±5μm	104	38	39.9	39.9
EX150 -071 PW	150	59	1:1 PW	71	116±6μm	116±6μm	91	29	33.5	33.5
EX140 -063 PW	140	55	1:1 PW	63	105±5μm	105±5μm	116	41	43.2	43.2
EX140 -080 PW	140	55	1:1 PW	80	140±7μm	140±7μm	97	29	40	40
UX135 -045 PW	135	53	1:1 PW	45	73±4μm	74±4μm	143	58	42.2	42.7
EX135 -048 PW	135	53	1:1 PW	48	79±4μm	79±4μm	139	55	43.1	43.1
EX135 -055 PW	135	53	1:1 PW	55	95±5μm	95±5μm	133	50	47.5	47.5
EX125 -071 PW	125	49	1:1 PW	71	116±6μm	116±6μm	130	41	47.6	47.6
UX120 -045 PW	120	47	1:1 PW	45	73±4μm	74±4μm	167	62	45.4	46.1

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EX120 -048 PW	120	47	1:1 PW	48	80±4μm	80±4μm	163	59	47.4	47.4
EX120 -055 PW	120	47	1:1 PW	55	95±5μm	95±5μm	157	55	52.3	52.3
EX120 -063 PW	120	47	1:1 PW	63	105±5μm	105±5μm	149	50	52	52
EX120 -080 PW	120	47	1:1 PW	80	137±7μm	137±7μm	130	38	51.4	51.4
EX110 -080 PW	110	43	1:1 PW	80	132±7μm	132±7μm	150	42	55.7	55.7
EX100 -055 PW	100	39	1:1 PW	55	95±5μm	95±5μm	199	61	58.3	58.3
EX100 -071 PW	100	39	1:1 PW	71	122±6μm	122±6μm	182	51	62.6	62.6
EX100 -080 PW	100	39	1:1 PW	80	134±7μm	134±7μm	174	47	62.9	62.9
EX 90 -071 PW	90	35	1:1 PW	71	125±6μm	125±6μm	210	55	69.2	69.2
EX 90 -080 PW	90	35	1:1 PW	80	137±7μm	137±7μm	202	51	70.2	70.2
EX 80 -055 PW	80	31	1:1 PW	55	95±5μm	95±5μm	263	69	65.2	65.2
EX 80 -071 PW	80	31	1:1 PW	71	125±6μm	125±6μm	246	60	75	75
EX 80 -100 PW	80	31	1:1 PW	100	170±9μm	170±9μm	218	47	80.1	80.1
EX 70 -055 PW	70	27	1:1 PW	55	95±5μm	95±5μm	308	72	68.4	68.4
EX 70 -071 PW	70	27	1:1 PW	71	125±6μm	125±6μm	291	64	80.4	80.4
EX 70 -125 PW	70	27	1:1 PW	125	240±24μm	240±24μm	238	43	103.3	103.3
EX 60 -120 PW	60	24	1:1 PW	120	210±21μm	210±21μm	303	51	107.8	107.8
EX 60 -145 PW	60	24	1:1 PW	145	260±26μm	N/A	278	43	112	N/A
EX 50 -200 PW	50	20	1:1 PW	200	370±37μm	N/A	308	37	136	N/A
EX 40 -200 PW	40	16	1:1 PW	200	370±37μm	N/A	435	47	173.6	N/A
EX 30 -150 PW	30	12	1:1 PW	150	290±29μm	N/A	696	68	196	N/A
EX 30 -250 PW	30	12	1:1 PW	250	480±48μm	N/A	597	50	238.7	N/A

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EX 25 -300 PW	25	10	1:1 PW	300	600±60μm	N/A	716	50	173.9	N/A

Mesh Count: Number of threads per inch or centimeter

Weave Type: Plain Weave (PW) or Twill Weave (TW)

Thread Diameter: The diameter of each thread before weaving

Mesh Thickness: The average thickness of the woven mesh

Mesh Opening: The distance between adjacent threads

Open Area: The ratio (%) of the open area to the thread area within a woven mesh

Theoretical Ink Volume: The amount of ink the mesh should be able to hold/transfer, given as the ratio (%) of open area × mesh thickness to the thread area

1. EX Screen thread available upon request, primarily in mesh counts below 255/in.