ALPHA™

FLEXTRACE® SUBSTRATE

chromaline®
SCREEN PRINT PRODUCTS

www.chromaline.com

Alpha FlexTrace™

Advanced Substrate Technology for High Accuracy Printing

FlexTrace Printed Electronic Substrate from Chromaline is engineered to improve print acuity of conductive pastes and ease on-press setup & repeatability. FlexTrace allows engineers to design higher density functionality while providing press operators setup latitude and repeatability.

Alpha FlexTrace Key Features

FLEXIBLE
Pre-stabilized, flexible polyester substrate

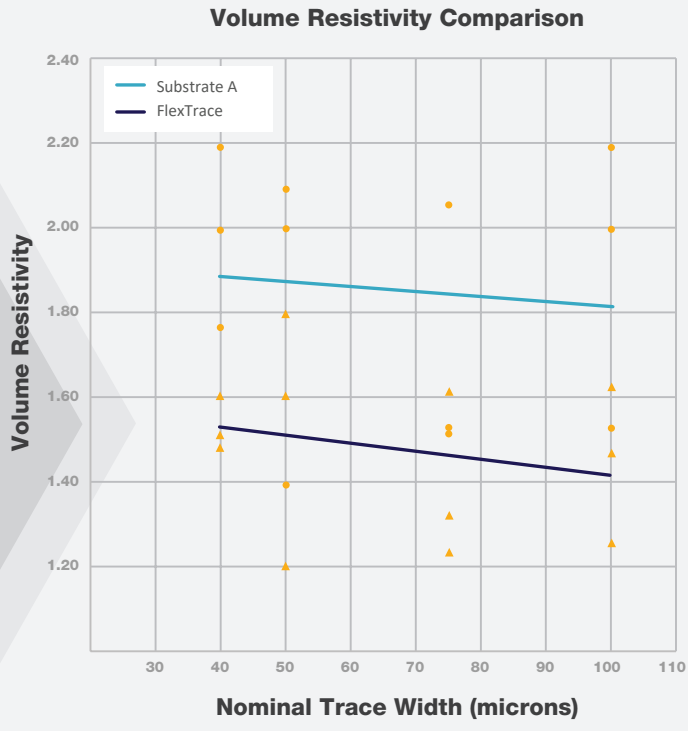
HIGHEST PRINT ACUITY
Restricts conductive ink spread for highest print acuity

LOWER PRODUCTION COSTS
Minimizes circuit footprint allowing for new applications, less waste and lower production costs

LOWER RESISTANCE VALUES
Yields traces with higher aspect ratios and higher cross sectional area for lower resistance values

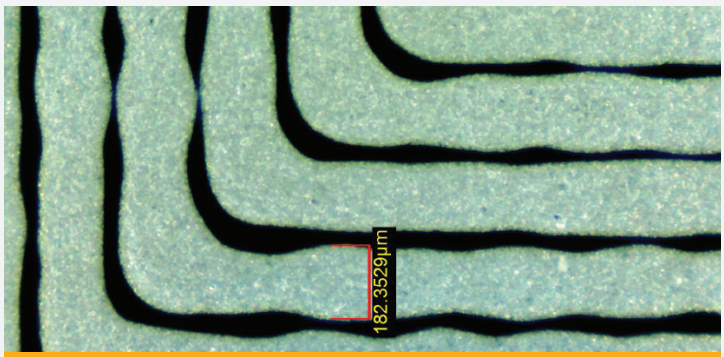
CONSISTENT RESULTS
Provides latitude in press conditions while maintaining consistency of results

MULTIPLE VERSIONS
Available in single-sided 5-mil; and dual-sided 4 and 6-mil versions



The more uniform trace widths on Alpha FlexTrace equate to a more efficient use of printed paste, resulting in lower line resistance.

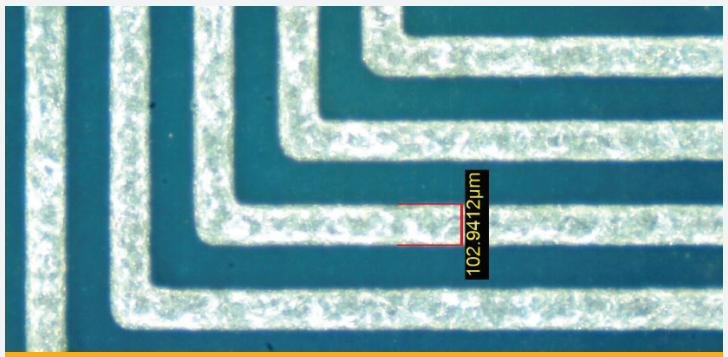
FlexTrace features proprietary surface technology that adheres conductive particles and yields high aspect ratios while restricting lateral spread. Combined with Chromaline's superior UDC-ACE emulsion, precision traces and spaces below 100 microns are easily accomplished.



80% SPREAD

STANDARD PET

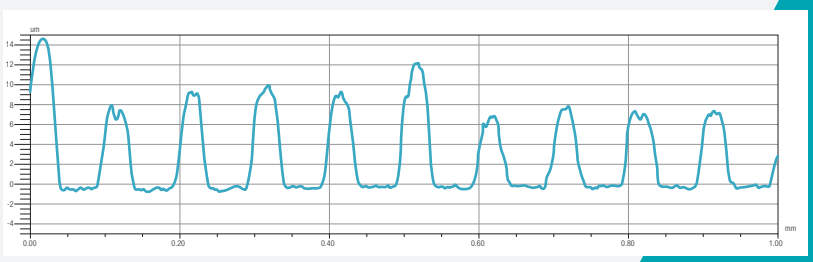
100µm conductive Ag traces printed on standard PET. Printed lines spread as much as 80% over design size.



<5% SPREAD

FLEXTRACE

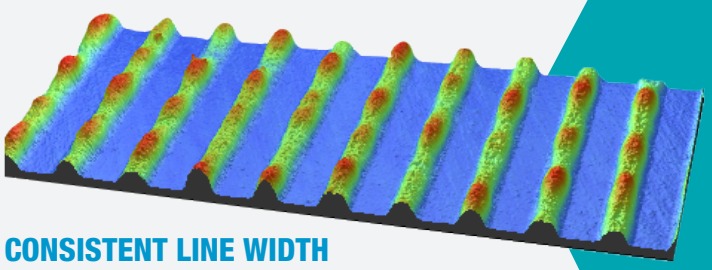
100µm conductive Ag traces printed on Alpha FlexTrace. Printed lines spread less than 5% over design size.



X PROFILE

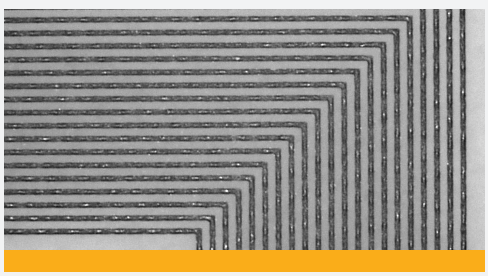
X Profile 50 micron traces and spaces.

Standard deviation of printed trace widths remains more consistent on Alpha FlexTrace across different line widths.



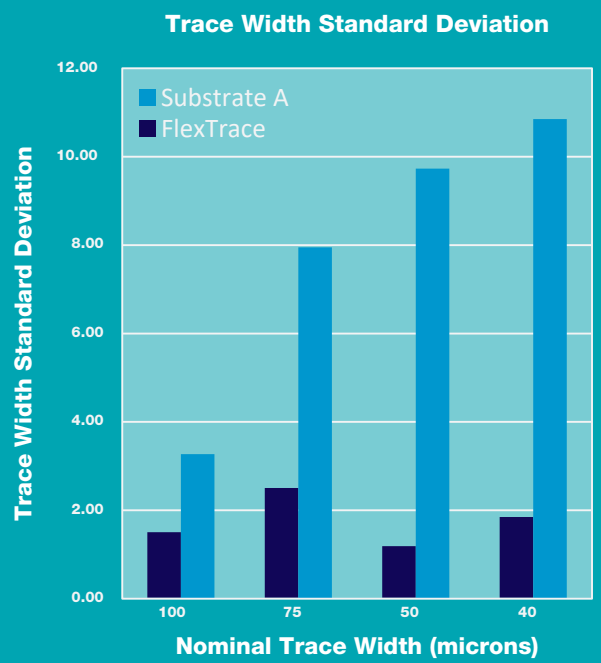
CONSISTENT LINE WIDTH

75µm conductive right angle traces printed on Alpha FlexTrace. Printed line width is consistent and accurately reproduces design size.



RIGHT ANGLES RESOLVED

40-micron lines and spaces resolved with Alpha FlexTrace 5 mil substrate.



STORAGE & HANDLING

GLOVES
1
Handle with gloves to avoid contamination. Clean room environment recommended.

HUMIDITY
2
Store at room temperature below 50% humidity in fiber-free packaging.

STORE FLAT
3
Store sheeted material on a flat surface.

DRY & STABILIZE
4
Prior to printing, run film through a forced air oven (100°C, 5 minutes) to drive-off any residual moisture from storage. To reduce edge curl in the T15, pre-stabilize with the coated side down.

CLEAN
5
Remove contaminants using clean, compressed air or a tack roller/cloth.

CURE
6
Cure ink/paste at a maximum temperature of 150°C.

FLEXTRACE PRODUCTS

- **Pre-stabilized, flexible PET**
- **Single & Double sided available**
- **Custom cut sheets or rolls up to 52" wide**
- **Translucent**

TYPICAL PRODUCT VALUES

Specification	T15 Value	T24 Value	T26 Value	Units	Test Method
Sides Coated	Single	Double	Double	N/A	N/A
Total Film Thickness	5-mil (140 +/-6 µm)	4-mil (103 +/- 8 µm)	6-mil (154 +/- 8 µm)	--	Micrometer
Transmission / Haze	90 +/- 3%	87 +/- 3%	87 +/- 3%	Light transmittance	X-rite Densitometer
Dimensional Stability	-1.28 fill; -1.78 warp	TBD	TBD	mils/inch	IPC-TM-650 sec 2.2.4, A
Tensile Strength	140.4	TBD	TBD	MPa	ASTM D882
Elongation	98.3 %	TBD	TBD	--	ASTM D882
Water Absorption	0.112 %	TBD	TBD	--	IPC-TM-650 2.6.2
Dielectric Strength	110.5 @ 96 hrs	110.5 @ 96 hrs	110.5 @ 96 hrs	kV/mm	ASTM D149, 23 °C, 50% RH
Permittivity / Dielectric Constant	3.2	3.2	3.2	F/m	ASTM D150 / IPC-TM-650
Volume Resistivity	5.56E+15 @ 96hrs	5.56E+15 @ 96hrs	5.56E+15 @ 96hrs	Ohms-cm	ASTM D257, 23 °C, 50% RH
Surface Resistivity	2.89E+12 @ 96hrs	2.89E+12 @ 96hrs	2.89E+12 @ 96hrs	Ohms-cm	ASTM D257, 23 °C, 50% RH

Product of the Year
In 2016, SGIA named Alpha FlexTrace the Screen Printing Accessory Product of the Year.

Chromaline Screen Print Products
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