

The logo features a cluster of colorful dots in shades of green, yellow, red, and blue, with some dots connected by thin lines, resembling a molecular or network structure.

AR Ink™

Print & Beyond!

High-performance ink solutions
Specialty & high-security applications
Consulting & support

BIOMETRIC
MAGNETIC
INVISIBLE
DYES

PIGMENTS
IR & UV
CMYK SPOT
DISPERSIONS



diversifiednano.com



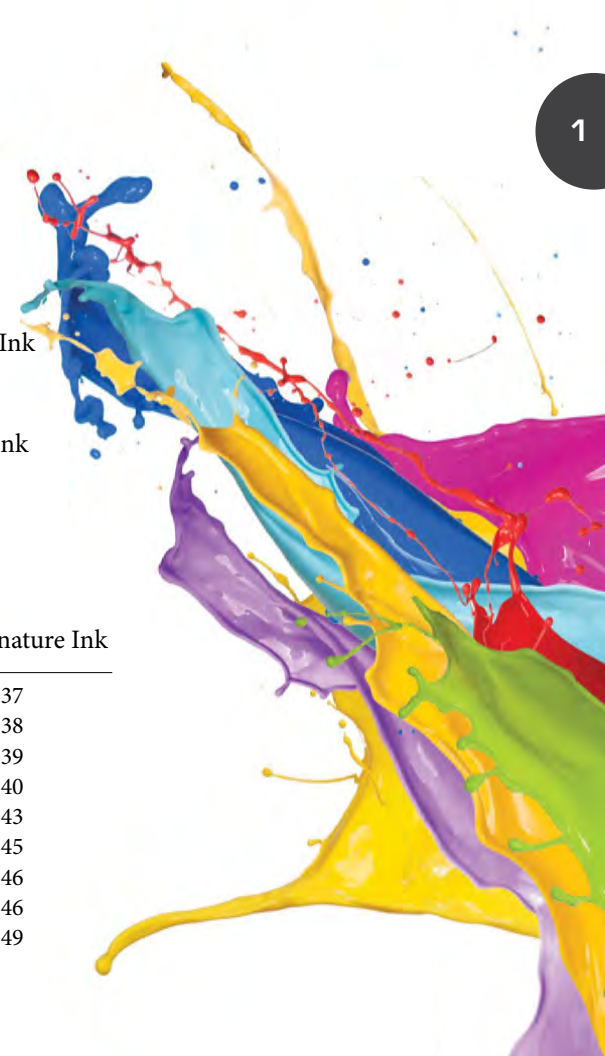
goinkcrypt.com



Diversified Nano Solutions Corporation (DNSC), based in San Diego, California, specializes in developing and manufacturing nano materials and fluids used in high-performance functional inks for digital printing, unique customer applications, research and surface treatments. As a leading manufacturer of digital inks, DNSC's comprehensive ink portfolio includes: cmyk/spot-dye and pigment, MICR, Invisible IR and UV, food, textile and custom ink based on water, solvent and UV curing formulations. DNSC provides INKcrypt® AR Ink™ Solutions, an industry exclusive, which integrates revolutionary AR Ink™ and INKcrypt's biomarker technology with digital inks and the power of the internet. INKcrypt® AR Ink™ enables instant proof-of-item identity and location tracking using any internet connected device. The solution helps individuals, brand owners and large enterprises to grow market share and eliminate illicit trade. Counterfeiting and illicit trade are pervasive in nearly every industry sector, harming consumers and brand owners, while costing the global economy over 1 trillion dollars annually. Preservation of product and information integrity is increasingly important as sophisticated counterfeiting efforts easily defeat existing anti-counterfeit technologies.



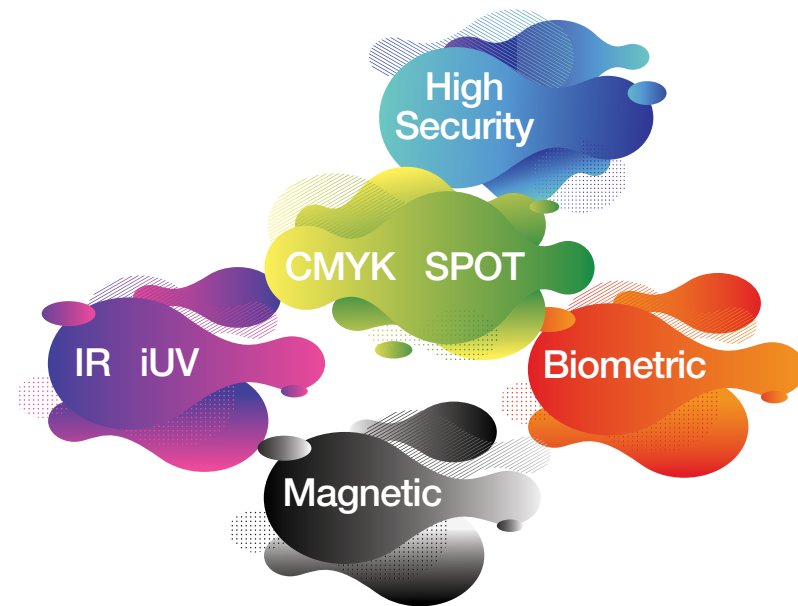
<ul style="list-style-type: none"> ■ INKcrypt®2-9 AR Ink™ & INKcrypt® AR Ink™ ■ K-Series10-11 MICR Ink & Pigment ■ I-Series12-13 Invisible UV fluorescent & IR absorbing Dye & Pigment Ink ■ X-Series14-19 Special Materials Pigment Powders UV Fluorescent – XUV 14-15 IR Absorbing – XIR..... 16-17 PhotoLuminescent – XPL 18-19 ThermoChromic – XTC 18-19 PhotoChromic – XPC..... 18-19 ■ F-Series20-21 Food Grade Pigment Powders ■ T-Series22-23 Textile Pigment Powders 	<ul style="list-style-type: none"> ■ V-Series24-25 Dye & Dye Pigment Hybrid Ink ■ E-Series26-27 General Purpose Pigment Ink ■ S-Series28-29 Specialty and UltraFast-Drying Ink ■ U-Series30-31 Black Ultima4000 Fast-Drying Ink ■ M-Series32-33 Magnetic Fluid ■ Signature X34-37 Unique Spectrophotometric Signature Ink <hr/> <ul style="list-style-type: none"> SpectorProX.....34-37 TransChrome™38 Applications39 Compatibility40 Accessories41-43 UV Samples44-45 About.....46 Contact.....46 Index47-49
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AR Ink™
Print & Beyond!

AR Ink™ Solutions — AR Ink™ allows conveyance of hidden content beyond visible reality—hidden images, image in an image, etc.—that link biomarkers to supply chains, brand owners, product features and more. AR Ink™ enables Print & Beyond!



- 
- Increase Value & Trust
 - Grow Market Share
 - Maximize Transparency & Loyalty

AR Ink™ + Enablers = Value / Benefits



Real-Time Authentication,
Tracking, Analytics and
True Counterfeit Protection
at low cost and superior
performance!

authenticate. track. connect. goinkcrypt.com

INKcrypt® AR Ink™ Solutions —
INKcrypt® is a revolutionary DNA
biomarker technology for ink and
fluids which eliminates losses from
counterfeiting, revolutionizes supply
chain and provides a next level
customer loyalty experience.



INKcrypt® AR Ink™ Solutions* for:

- **K-Series** - MICR Ink & Pigment
- **I-Series** - Invisible UV fluorescent & IR absorbing Dye & Pigment Inks
- **V-Series** - Dye & Dye Pigment Hybrid Inks
- **E-Series** - General Purpose Pigment Inks
- **S-Series** - Specialty and UltraFast-Drying Inks
- **T-Series** - Textile Pigments

*Also available for qualified 3rd party inks.



INKcrypt® Protects Value

INKcrypt® DNA Biomarkers can be added to virtually any physical item, surface, packaging, porous, non-porous materials etc.—ideal protection for Business, Finance, Pharmaceuticals, Industrial, and valuables.



Methods to Apply INKcrypt® Biomarkers

INKcrypt® DNA Biomarkers are available as fluids/inks that can be applied in a variety of customer-specified methods. See next page for large format options.



Brush

Markers

Inkjet

Airbrush

Dispenser

Flexo/Offset

INKcrypt® Process

Implement in three easy steps!

- 1 Apply
- 2 Test
- 3 Authenticate
Analyze
Track

INKcrypt® Features

Authentication: Item (Level 1 & 2)	
Global Tracking	
Authentication: Biomarker (Level 3 – “Certain”)	
Analytics	
Test Time: Item (Level 1 & 2)	< 1 sec
Test Time: Brand ID (Level 3)	~ 5 sec
Cost per Test: Item (Level 1 & 2)	0
Cost per Test: Brand (Level 3)	starting at <20 cent
Cost per Graphic Mark: Level 1 & 2	starting at <0.1 cent
Cost per Biomark: Level 3 (“Certain”)	starting at <0.2 cent
Annual Cost per Membership	Varies
Test Requirements: Item (Level 1 & 2)	Open Standard
Test Requirements: Biomarker (Level 3)	Proprietary
Marking Requirements: Item (Level 1 & 2)	Open Standard
Marking Requirements: Biomarker (Level 3)	Open Standard

...More Industrial application options continued from Page 6!



INKcrypt® Testing & Authentication Process

STEP 1. Collect Unique DNA Biomarker Sample from INKcrypt® Biomark.



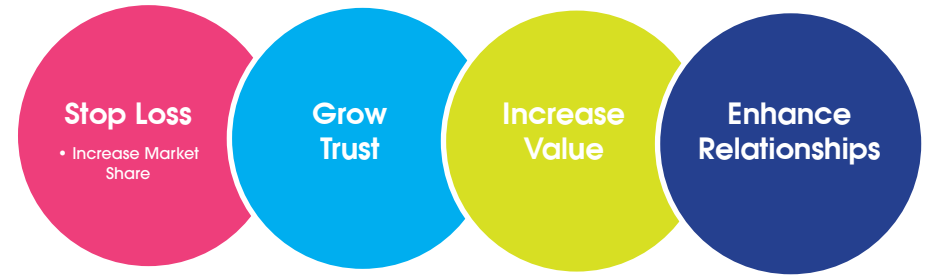
STEP 2. Test DNA Biomarker sample in real-time using INKcrypt® Test Strip or the push-release INKcrypt® Plus Genuine Item Label.



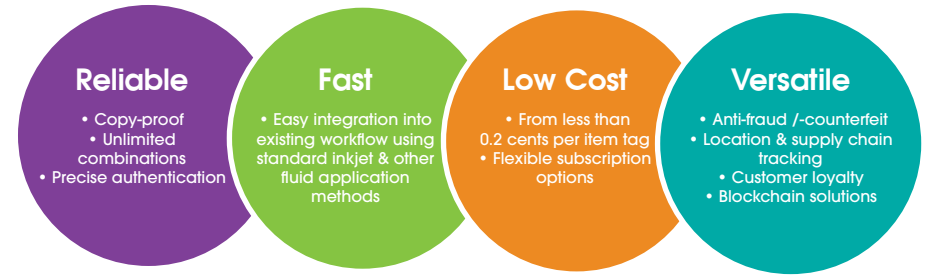
STEP 3. Authenticate INKcrypt® Test Result using the INKcrypt® platform. Scan QR or enter INKcrypt® Test Strip ID using the goINKcrypt app/website to Submit, Analyze & Track.



INKcrypt® Improves Value



INKcrypt® Gives You Piece of Mind





k-series

General purpose & security
MICR ink—ideal for professional,
high speed, high density, industrial
and business inkjet printing.

Aqueous Inkjet Ink - Dot on Demand¹

Part No. ²	Product Name	Ink Type	Viscosity (cPs)	Surface Tension (dyn/cm)	Density (g/mL)	Particle Size (nm)	Magnet Signal (@600x600-16pL)
● Km1XX	x-nano™ Elite Black MICR K1 (“2a”)	MICR	8.0 - 10.0	30 - 41	1.39 - 1.45	50 ± 20	90 - 110%
● Km3XX	x-nano™ Elite Black MICR K3 (“3X”)	MICR	8.5 - 10.0	30 - 42	1.42 - 1.45	50 ± 20	100 - 130%
● Km4XX	x-nano™ Elite Black MICR K4 (“3a#”)	Pigment	7.0 - 9.5	32 - 42	1.44 - 1.46	50 - 170 ± 20	100 - 120%
● Km5XX	x-nano™ Elite Black MICR K5 (“156”)	MICR	12.0 - 17.1	32 - 42	1.50 - 1.58	50 ± 20	100 - 130%
● Ks6XX	x-nano™ Elite Black Ks6	Pigment	5.0 - 7.0	32 - 42	1.10 - 1.20	50 - 170 ± 20	< 20%
● Km7XX	x-nano™ Elite Black MICR KA40	Pigment	7.0 - 9.5	32 - 42	1.25 - 1.30	50 - 170 ± 20	35 - 45%
● Km8XX	x-nano™ Elite Black MICR KB80	Pigment	7.0 - 9.5	32 - 42	1.25 - 1.30	50 ± 20	75 - 85%

Stability	High (no agitation required)
Shelf Life	>24 months
Media Compatibility	Porous, non-porous paper & corrugated
Print Head Compatibility	Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*

¹ Optional: Solvent, Oil and UV curable vehicle – contact DNSC for more information.

² Part numbers include a variable component “X” which changes based on print heads and target print systems.

* Details on Page 40

I-Series - UV fluorescent and IR absorbing invisible ink—ideal for general purpose, high-definition inkjet printing—for security, authenticating, tracking, decorative, textile, life science and many other special effect applications.

Aqueous Inkjet Ink - Dot on Demand¹

Part No. ²	Product Name	Ink Type	Viscosity* (cPs)	Surface Tension* (dyn/cm)	Density (g/mL)	Particle Size (nm)	Detection (Type, nm)
● B1XI	x-nano™ UV Blue 460	Dye	3.0 - 8.0	30 - 40	1.1 - 1.2	NA	UV, 365
● G1XI	x-nano™ UV Green 545	Pigment	3.0 - 8.0	30 - 40	1.1 - 1.2	170 ± 50	UV, 365
● G2XI	x-nano™ UV Green-Yellow 550	Pigment	3.0 - 8.0	30 - 40	1.1 - 1.2	170 ± 50	UV, 365
● Y1XI	x-nano™ UV Yellow-Green 560	Pigment	3.0 - 8.0	30 - 40	1.1 - 1.2	190 ± 50	UV, 365
● R1XI	x-nano™ UV Red 615	Pigment	3.0 - 8.0	30 - 40	1.1 - 1.2	190 ± 50	UV, 365
● W1XI	x-nano™ UV White 400-800	Pigment	3.0 - 8.0	30 - 40	1.1 - 1.2	190 ± 50	UV, 365
● K1XI	x-nano™ IR 783	Dye	3.0 - 8.0	30 - 40	1.0 - 1.1	NA	IR, 783
● K2XI	x-nano™ IR 820	Dye	3.0 - 8.0	30 - 40	1.0 - 1.1	NA	IR, 820
● K4XI	x-nano™ IR 1040	Dye	3.0 - 8.0	30 - 40	1.0 - 1.1	NA	IR, 1040

Stability

High (no agitation required)

Shelf Life

>24 months

Media Compatibility

Porous, non-porous paper & corrugated

Print Head Compatibility

Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*

¹ Optional: Solvent, Oil and UV curable vehicle – contact DNSC for more information.

² Part numbers include a variable component “X” which changes based on print heads, target print system and other properties.

* Details on Page 40



i-series

Disrupt and inspire with stunning invisible color inkjet printing!





x-series

Special Effect Materials

UV-Fluorescent Pigment Powder — Photon Energy Conversion

X-Series - UltraViolet (UV) fluorescent pigment powder and base dispersions in a variety of colors—ideal for ink (digital, offset, flexo), paint, paste, dispersions, gel, and powder compositions delivered in bulk as base components—for users looking to develop, produce and market applications based on the special effect of UV fluorescence (photon reactive).

Part No. ¹	Product Name	Powder/Dispersion Color	Fluorescent Color ²	Exciting wavelength → emitting wave length (nm)	Compatibility Range	Particle Size ³ Powder (nm) / Dispersion (nm)	Product Vehicle
● XUVG-510-540/# (D)	UVF Green (D)	White Colorless	Green	254/365/385 → 510 - 540	Aqueous Solvent UV curing	2000 - 5000/ 150 - 200	DNSC offers custom development and production of ink, paint, paste, dispersion, gel, cream and powder with UV fluorescent properties.
● XUVB-460-480/# (D)	UVF Blue (D)	White Colorless	Blue	365/385 → 460 - 480	"	"	
● XUVR-620-640# (D)	UVF Red (D)	White Colorless	Red	254/365/385 → 620 - 640	"	"	
● XUVO-590-610X (D)	UVF Orange (D)	White Colorless	Orange	365/385 → 590 - 610	"	"	
● XUVY-560-580# (D)	UVF Yellow (D)	White Colorless	Yellow	365/385 → 560 - 580	"	"	

¹ Part Number determination subject to specific user criteria – contact DNSC for more information.
² DNSC is able to formulate and match a large variety of fluorescent colors not listed on this chart.
³ Other larger or finer particle sizes are also available as to customer's actual application needs.

Packaging: sample 10g / 1kg / 5kg / 10kg / 25kg / drum
 Suggested end-user price: visit diversifiednano.com for up-to-date pricing information and terms.



x-series

Special Effect Materials

IR - Absorbing Pigment Powder — Infrared Absorption

X-Series - Infrared-absorbing (IR) pigment powder and base dispersions in a large variety of absorbing wavelengths (780-1070nm)—ideal for ink (digital, offset, flexo), paint, paste, dispersions, gel, and powder compositions delivered in bulk as base components—for users looking to develop, produce and market applications based on the special effect of infrared absorption.

Part No. ¹	Product Name	Powder/ Dispersion Color	Absorbance Maxima (nm) → Absorbing Color	Compatibility Range	Particle Size ³ Powder (nm) / Dispersion (nm)	Product Vehicle
● XIRK-780-790 (D)	IR 780-790 (D)	Brown-Black	780 - 790 → Black	Aqueous Solvent UV curing	2000 - 5000/ 150 - 200	DNSC offers custom development and produc- tion of ink, paint, paste, dispersion, gel, cream and powder with infrared absorbing properties.
● XIRK-810-850 (D)	IR 810-850 (D)	Brown-Black	810 - 850 → Black	"	"	
● XIRK-880-940 (D)	IR 880-940 (D)	Brown-Black	880 - 940 → Black	"	"	
● XIRK-1000-1040 (D)	IR 1000-1040 (D)	Brown-Black	1000 - 1040 → Black	"	"	
● XIRK-1070 (D)	IR 1070 (D)	Brown-Black	1070 → Black	"	"	

¹ Part Number determination subject to specific user criteria – contact DNSC for more information.

² DNSC is able to formulate and match a large variety of IR absorbing colors not listed on this chart.

³ Other larger or finer particle sizes are also available as to customer's actual application needs.

Packaging: sample 10g / 1kg / 5kg / 10kg / 25kg / drum

Suggested end-user price: visit diversifiednano.com for up-to-date pricing information and terms.



x-series

Special Effect Materials

PhotoLuminescent Pigment Powder — Glow-In-The-Dark

ThermoChromic Pigment Powder — Temperature Induction

PhotoChromic Pigment Powder — Photon Induction

X-Series - PhotoLuminescent (PL) pigment powder—ideal for ink (digital, offset, flexo), paint, paste, dispersions, gel, and powder compositions delivered in bulk as base components—for users looking to develop, produce and market applications based on the special effect of photoluminescence (glow-in-the-dark).

X-Series - ThermoChromic (TC) pigment powder—available in a large variety of colors, is ideal for ink (digital, offset, flexo), paint, paste, dispersions, gel, and powder compositions delivered in bulk as base components—for users looking to develop, produce and market applications based on the special effect of thermochromic (temperature induced) color change.

X-Series - PhotoChromic (PC) pigment powder—available in a large variety of colors, is ideal for ink (digital, offset, flexo), paint, paste, dispersions, gel, and powder compositions delivered in bulk as base components—for users looking to develop, produce and market applications based on the special effect of photochromic (photon induced) color change.

Specifications available at diversifiednano.com




F-Series - food grade pigment powder in a large variety of colors—ideal for ink (dot-on-demand, offset, flexo), paint, paste, dispersions, gel, and powder compositions delivered in bulk as base components—for users looking to develop, produce and market applications based on the properties and regulatory compliance requirements associated with food and food packaging.

Part No. ¹	Product Name	Pigment Powder Color ²	Compatible Substrates	Composition Summary	Compatibility Range	Particle Size ³ Powder (nm) / Dispersion (nm)	Product Vehicle
● FGK-001/999	FG Black (P)	Black	Bioorganic Surfaces & Packaging	Biocompatible Organic Compounds & Metal Oxides	Aqueous	3000 - 10000/ 150 - 250	DNSC offers custom development and production of ink, paint, paste, dispersion, gel, cream and powder with food grade and food packaging properties.
● FGB-001/999	FG Blue (P)	Blue	"	"	"	"	
● FGR-001/999	FG Red (P)	Red	"	"	"	"	
● FGO-001/999	FG Orange (P)	Yellow	"	"	"	"	
● FGY-001/999	FG Yellow (P)	Orange	"	"	"	"	

¹ Part Number determination subject to specific user criteria – contact DNSC for more information.

² DNSC is able to formulate and match a large variety of food grade pigment colors not listed on this chart.

³ Other larger or finer particle sizes are also available as to customer's actual application needs.

Packaging: sample 10g / 1kg / 5kg / 10kg / 25kg / drum

Suggested end-user price: visit diversifiednano.com for up-to-date pricing information and terms.



T-Series - textile pigment powder in a large variety of colors—ideal for ink (digital, offset, flexo), paint, paste, dispersions, gel, and powder compositions delivered in bulk as base components—for users looking to develop, produce and market applications based on printing on textiles.

Textile Pigment Powder¹

Part No. ¹	Product Name & Color
● TK-001/999	T Black (P)
● TB-001/999	T Blue (P)
● TR-001/999	T Red (P)
● TO-001/999	T Orange (P)
● TY-001/999	T Yellow (P)

Powder Type	Pigment
Pigment Type	Organic, Inorganic, Synthetic
Colors²	Variety of colors
Particle Size³	0.1 - 3.0 μm
Water Resistance	Very good
Chemical Resistance	Very good
Abrasion Resistance	Very good
Lightfastness	Very good
Media Compatibility	Various textiles, fibers, fabrics, cotton & more

¹ Part Number determination subject to specific user criteria – contact DNSC for more information.
² DNSC is able to formulate and match a large variety of textile pigment colors not listed on this chart.
³ Other larger or finer particle sizes are also available as to customer’s actual application needs.

Packaging: sample 10g / 1kg / 5kg / 10kg / 25kg / drum
 Suggested end-user price: visit diversifiednano.com for up-to-date pricing information and terms.



V-Series - value general purpose dye and dye/pigment hybrid ink—ideal for economical, high-quality, desktop inkjet printing.

Aqueous Inkjet Ink - Dot on Demand¹

Part No. ²	Product Name
● K1XV	x-nano™ Premium Black
● C1XV	x-nano™ Premium Cyan
● M1XV	x-nano™ Premium Magenta
● Y1XV	x-nano™ Premium Yellow
● R1XV	x-nano™ Premium Red (Spot)
● B1XV	x-nano™ Premium Blue (Spot)
● B1XV	x-nano™ Premium Green (Spot)

Ink Type	Dye & Dye Pigment Hybrid
Viscosity	2.0 - 6.5 cPs*
Surface Tension	32 - 42 dyn/cm*
pH	7.0 - 8.5*
Density	1.0 - 1.2 g/mL*
Particle Size	N/A
Waterfastness	Very good
Lightfastness	Very good
Shelf Life	>24 months
Media Compatibility	Porous, non-porous paper & corrugated
Print Head Compatibility	Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*

¹ Optional: Solvent, Oil and UV curable vehicle – contact DNSC for more information.
² Part numbers include a variable component “X” which changes based on print heads, target print system and other properties.
 * Details on Page 40



E-Series - elite general purpose pigment ink—ideal for professional, high-speed, high-density, industrial inkjet printing.

Ink Type	Pigment
Viscosity	2.0 - 6.5 cPs*
Surface Tension	32 - 42 dyn/cm*
pH	7.0 - 8.5*
Density	1.0 - 1.2 g/mL*
Particle Size	80 - 200 nm
Waterfastness	Excellent
Lightfastness	Excellent
Stability	High (no agitation required)
Shelf Life	>24 months
Media Compatibility	Porous, non-porous, coated, glossy and offset
Print Head Compatibility	Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*

Aqueous Inkjet Ink - Dot on Demand¹

Part No. ²	Product Name
● K1XE	x-nano™ Elite Black
● C1XE	x-nano™ Elite Cyan
● M1XE	x-nano™ Elite Magenta
● Y1XE	x-nano™ Elite Yellow
● R1XE	x-nano™ Elite Red (Spot)
● B1KE	x-nano™ Elite Blue (Spot)
● G1KE	x-nano™ Elite Green (Spot)

¹ Optional: Solvent, Oil and UV curable vehicle – contact DNSC for more information.
² Part numbers include a variable component “X” which changes based on print heads, target print system and other properties.
 * Details on Page 40



S-Series - specialty Fast-Dry pigment ink—ideal for professional, high-speed, industrial inkjet printing.

Aqueous Inkjet Ink - Dot on Demand¹

Part No. ²	Product Name
● K1XS	x-nano™ Elite Black Fast-Dry
● K2XS	x-nano™ Elite Black FDX UltraFast-Dry
● R1XS	x-nano™ Elite Red Fast-Dry
● R2XS	x-nano™ Elite Red FDX UltraFast-Dry
● B1XS	x-nano™ Elite Blue Fast-Dry
● B2XS	x-nano™ Elite Blue FDX UltraFast-Dry
● G1XS	x-nano™ Elite Green Fast-Dry
● G2XS	x-nano™ Elite Green FDX UltraFast-Dry

Ink Type	Pigment
Viscosity	3.0 - 7.0 cPs*
Surface Tension	25 - 35 dyn/cm*
pH	7.0 - 9.0*
Density	1.1 - 1.2 g/mL*
Particle Size	130 ± 20 nm
Waterfastness	Excellent
Lightfastness	Excellent
Stability	High (no agitation required)
Shelf Life	>24 months
Media Compatibility	Porous, non-porous paper & corrugated
Print Head Compatibility	Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*



¹ Optional: Solvent, Oil and UV curable vehicle – contact DNSC for more information.
² Part numbers include a variable component “X” which changes based on print heads, target print system and other properties.
 * Details on Page 40



u-series

Sharp edge acuity for rich printing, dries unassisted with ultima fast-dry properties, and is fade, smear and water resistant.



U-Series - Black Ultima4000 Fast-Dry Rich Black Dye ink—ideal for professional, high-speed, high-yield and high-end industrial inkjet printing.

High-definition bar codes, graphics & text for mailing, labeling & packaging.

Aqueous Inkjet Ink - Dot on Demand¹

Part No. ²	Product Name
● U1U4	x-nano™ Black Ultima4000
● U2U4	x-nano™ HP45 Black Ultima4000

Ink Type	Dye
Viscosity	2.0 - 6.5 cPs*
Surface Tension	25 - 40 dyn/cm*
pH	7.0 - 9.0*
Optical Density	K 1.2-1.4*
Decap	Excellent
Waterfastness	Good
Lightfastness	Excellent
Print Dry Time	Fast-dry, unassisted (no heat required)
Shelf Life	>24 months
Media Compatibility	Porous, non-porous paper & corrugated
Print Head Compatibility	Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*

¹ Optional: Solvent, Oil and UV curable vehicle – contact DNSC for more information.

² Part numbers include a variable component “X” which changes based on print heads, target print system and other properties.

* Details on Page 40



m-series Magnetic Fluid

Magnetic Fluid - Convertible Aqueous Dispersion¹

Part No. ²	Product Name	Type	Viscosity (cPs)	Surface Tension (dyn/cm)	Density (g/mL)	Particle Size (nm)
● MFI-X	x-nano™ Magnetic Fluid Iron Oxide	Nano Particle Dispersion	7.0 - 18.0	55 - 65	1.4 - 1.7	50 ± 20
● MFM-X	x-nano™ Magnetic Fluid Multi-Metal	Nano Particle Dispersion	7.0 - 18.0	55 - 65	1.4 - 2.0	50 ± 20

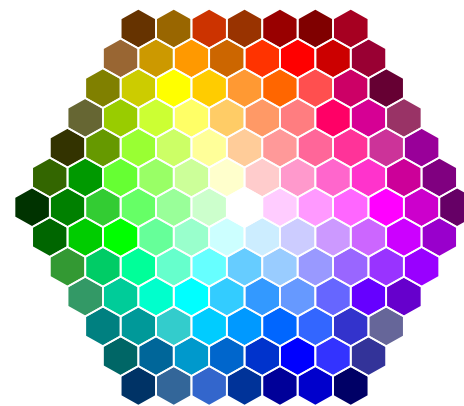
Stability	High (no agitation required)
Shelf Life	>24 months
Media Compatibility	Porous, non-porous paper & corrugated
Print Head Compatibility	Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*

¹ Optional: can be customized and converted for various applications – contact DNSC for more information.
² Part numbers include a variable component “X” which changes based on print heads and target print systems.
 * Details on Page 40

Signature X Inks

Signature X Inks – contain special blends of UV fluorescent and visible pigments & dyes to create unique spectrophotometric identities or “signatures”.

Signature X Inks® - Customized ink blend of Invisible UV fluorescent and visible pigments & dyes—ideal for unique, ultra-secure, anti-counterfeit inkjet printing.



Ink Type	Pigment & Dye Custom Hybrid
Viscosity	2.0 - 6.5 cPs*
Surface Tension	32 - 42 dyn/cm*
pH	7.0 - 8.5*
Density	1.0 - 1.2 g/mL*
Particle Size	50 - 200 nm
Waterfastness	Excellent
Detection	Visible light range
Stability	High (no agitation required)
Shelf Life	>24 months
Media Compatibility	Porous, non-porous, coated, glossy and offset
Print Head Compatibility	Piezo & Thermal for Industrial, Commercial, Office and Consumer printing platforms*

1 Optional: Solvent, Oil and UV curable vehicle – contact DNSC for more information.

2 Part numbers include a variable component “X” which changes based on print heads, target print system and other properties.

* Details on Page 40

SpectorProX

PRODUCT VALIDATOR

SpectorPro X – UV+Visible Spectrophotometer for ink signature analysis with associated SpectorPro X App. Exciting: 365-700nm; Emission: 400- 700nm.

Precise spectrophotometric ink “signature” verification.

Quick on-the-spot verification of unique UV fluorescent and visible ink pigment and dye compositions.

Ideal for authentication of documents, signatures, labels, packaging and physical objects associated with unique ink “signatures.”

Easy focusing of Target Spot—printed Signature Inks X content—on any surfaces and substrates.

Simple extraction and storage of original ink signature used for reference during ink signature authentication. **Authenticate in seconds!**



How it Works.



Position Magic Eye on bottom of **SpectorProX** over **Target Spot** and push “Authenticate”.



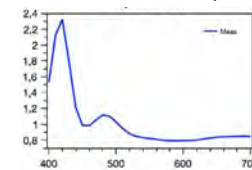
App auto syncs with **SpectorPro X** and displays authentication result instantly!

Document with barcode printed using invisible fluorescent magenta ink with unique spectrophotometric signature – **Target Spot!**



1

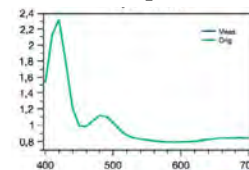
Original Signature X
Product Identity



Unique optometric signature

2

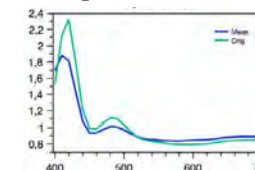
Authentication
Example 1



Result: 100,0 % Pass

3

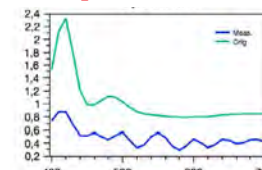
Authentication
Example 2 - Successful



Result: 93,3 % Pass

4

Authentication
Example 3 - Unsuccessful



Result: 48,7 % Fail

Original visible full color image.



Invisible image without UV light.

Self-illuminating invisible full-color image when excited with UV light.



TransChrome™ Invisible Image Generator Software for Inkjets works with any software application with print feature to instantly create invisible color print output on documents, packaging, pictures and graphics! TransChrome™ allows your invisible prints to closely resemble what you see on your computer screen.

- Authenticate and protect documents, checks, currency, packaging and products from counterfeiting and fraud.
- Impress and inspire with vividly self-illuminating color images which appear spontaneously once excited with UV light.
- Use with any Stealth-enabled printer using Stealth™ Invisible White, Red, Green and Blue inks.



Printing Applications

Industry	Printer	Function	Examples	Ink Series	
Desktop	Dot-on-Demand Inkjet Printer	• General purpose • Business • Commercial	• Books • Transactional	• Images • PDFs	• V-Series
		• MICR compliant	• Check printing		• K-Series
Commercial	Dot-on-Demand Digital Inkjet Press (Mono & Color)	• UV printing	• IDs • Checks	• Images • Documents	• I-Series
		• High speed • High resolution • High quality • General purpose	• Marketing materials (brochures, catalogs, DM, etc.) • Photos • TransPromo • Transactional		• K-Series • I-Series • V-Series • E-Series
Industrial	Dot-on-Demand Industrial Inkjet Systems	• High-speed tracking • Non-overt detection & sorting • Multi-layer	• Packaging • Documents • Envelopes & mailing		• K-Series
		• UV security	• IDs & passports • Checks • Images & documents • Lottery & currency		• I-Series
Textile	Dot-on-Demand Industrial Inkjet Systems / Wide Format	• High speed • Large format/quantity	• 400 pages @ maximum resolution		• S-Series
		• Research & development of magnetic fluids	• Chemistry, biochemistry, material science, molecular biology		• M-Series
Foodservice	Dot-on-Demand Industrial Inkjet Systems / Single Head Mount	• Direct to Garment (DTG) • Large format rolls	• Wallpaper • Fabric	• Pillows • Furniture	• T-Series
		• Edible food decoration • Track 'n Trace	• Cakes • Eggs	• Desserts • Produce	• F-Series

All x-nano™ inks and ink parameters are specifically adjusted to meet the requirements of print-head types and manufacturers listed.

Print Head Manufacturers

Piezo	Thermal
Brother	Canon
Epson	Hewlett Packard
Fujifilm Dimatix	Lexmark
Konica Minolta	Memjet
Kyocera	
Panasonic	
Ricoh	
Xerox	

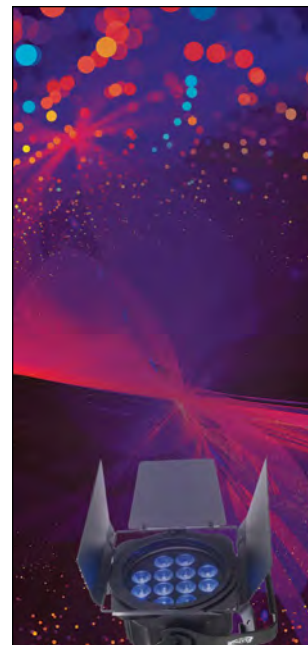
*FlexAdapt™ is a proprietary DNSC process which allows efficient adaption of physical and chemical properties of individual inks to meet the specific requirements of print system implementations and print head operating parameters.

Machine Type

Amica Systems	All piezo inkjet platforms and models
Brother	All desktop inkjet models
Canon	All piezo based inkjet platforms and models, including JetStream/ColorStream/VarioPrint Series
Domino/Brother	MonoCube
Epson	All piezo inkjet models
Hewlett Packard	Web Press T-Series
Hewlett Packard	OfficeJet/Deskjet
Hewlett Packard	TIJ 2.5 and 4.0
Impika/Xerox	iPrint/iEngine
Infoprint/Ricoh	Infoprint 5000 series
Kodak	VersaMark VL series
Lexmark	All thermal desktop and industrial inkjet models
Pitney Bowes	IntelliJet series
RR Donnelley	Custom inkjet presses
Screen	All piezo inkjet platforms and models
Xerox	All piezo based inkjet platform and models suitable for water based ink

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UV Stage Light



High-energy UV lights for large format posters and wall displays.

UV / MICR Scanners



UV Light Source & IR Laser Pointer



Smartphone Scanning

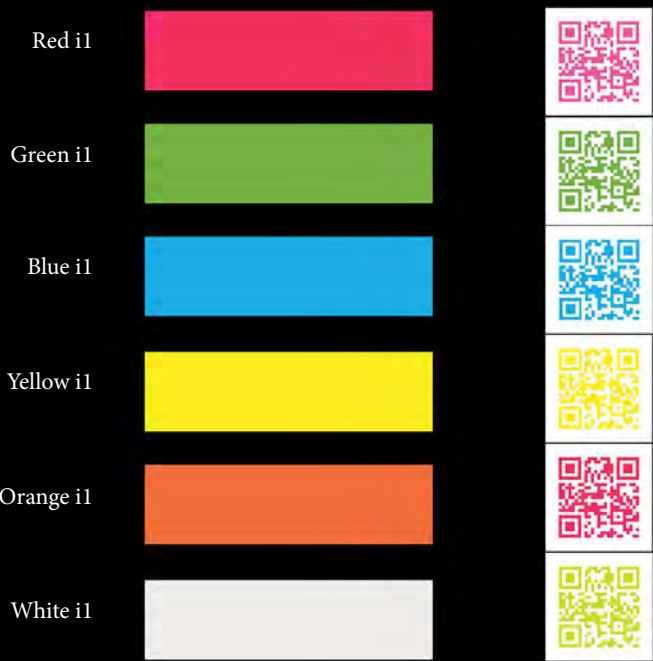


UV Flashlight & UV Key Chain



For supplies visit diversifiednano.com or contact us at info@diversifiednano.com.

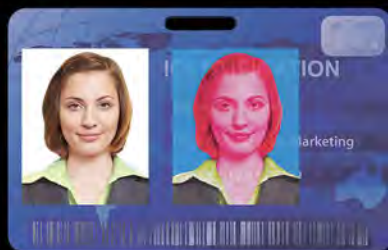
- Invisible UV fluorescent full-color imaging
- Invisible UV & IR ink for premium security applications
- Invisible Ink for thermal and piezo dot-on-demand print heads



Sample Passport



Sample Passport with UV



Sample check and sample check with visible UV DNA security under UV light



About MICR Ink

DNSC K-Series MICR inks are created using high-density, ultra-stable magnetic nanoparticles. MICR inks are widely used today by industrial and commercial users of high-speed inkjet presses, as well as home and office users of desktop inkjet printers for bank compliant check printing, long lasting archival documentation, security applications, payments and premium quality prints. Digital inkjet printers, All-in-One systems and fax machines can be equipped with MICR ink cartridges.

About CMYK-Channel & Specialty Ink

DNSC V-Series, E-Series and S-Series inks are based on dye and pigment nanoparticles formulated with special ingredients to achieve an unprecedented coverage and ultra-smooth appearance on various substrates. Both Value and Elite inks are available for desktop, industrial and commercial print applications utilizing thermal and piezo print heads that are compatible with a variety of manufacturers.

**About Invisible IR/UV Fluorescent Ink**

DNSC I-Series are invisible digital inkjet inks that allow for enhanced security printing applications and features with detection by UV or IR light. Security data could include: “stealth” tracking (1D and 2D barcodes, signatures, watermarks), document authenticity (tickets, passport, driver’s licenses, currency), secret information delivery, entertainment and fun applications. These inks can be printed, airbrushed, or hand-drawn on a variety of media without interfering with other content.

About Special Effect Materials

DNSC X-Series offers a new family of pigment powders and dispersions as base components for custom development and production of ink, paint, paste, dispersion, gel, cream and powder. These special effect raw materials: glow in the dark, fluoresce, absorb IR, and change color with light or heat. X-Series materials have extraordinary properties for various unique market applications.

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Print & Beyond!



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Authenticate. Track. Connect.

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