AXA INK
More Than Colors

SPECIALTY DIGITAL PRINTING INKS

Precision In Ink Technology.

Application-specific inks for digital textile printing. Stable jetting, printhead protection and repeatable quality. Designed for production continuity.

PRINTHEADS Epson Kyocera Ricoh Fujifilm



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Catalogue contents.

This catalogue gathers every product series, the technology and the advantages from axaink.com in one file. Click a title to jump to its page.



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ABOUT AXA INK

Where chemical engineering meets inkjet expertise.

Operating as an affiliate of Artemisia Kimya Teknolojileri, AXA INK serves dozens of customers in the global digital textile printing industry with a professional team that has more than 30 years of inkjet experience.

Our goal is to set a new benchmark for industrial inks. We combine in-house formulation and manufacturing know-how with agile R&D to deliver the speed, precision and batch-to-batch consistency modern production demands. With the new technologies we bring to digital ink production, we are making sustainable quality and trouble-free printing the standard.

30+	0.1 µm	0.2 µm	8	17
Years of inkjet experience	Particle size	Absolute filtration	Patents	Publications

CERTIFICATIONS AND COMPLIANCE

CERTIFIED ISO 9001 COMPANY

OEKO-TEX® CONFIDENCE IN TEXTILES ECO PASSPORT

ChemCheck

VOC FREE

MANUFACTURING & R&D

From the lab to the production line, our priority is quality and trust at every step.

01



Laboratory

Ink chemistry, printhead compatibility and fluid behaviour are formulated and tested together in our own laboratory.

02



Production

Through our proprietary Nano-Milling process, pigment is milled to a 0.1 µm particle size; every batch is produced under controlled conditions.

03



Process control

Production parameters are monitored from the control panel; every step is supervised for speed, precision and batch-to-batch consistency.

04



Filtration

Every ink passes through dedicated 0.2 micron absolute filters.

05



Quality control and filling

Every batch is verified by spectrophotometric quality control, then filled and packed.

06



Shipment

Palletised and stretch-wrapped, the products are dispatched to reach your print line safely.

Precision in color

Tight batch-to-batch colour consistency, verified by spectrophotometric quality control on every production run.

Integrated R&D

Ink chemistry, printhead compatibility and fluid behaviour are tested together in our own laboratory, backed by rigorous in-house quality control.

Filtration beyond standards

Every ink passes through dedicated 0.2 micron absolute filters.

SUSTAINABILITY & ENVIRONMENT

Kind to nature, safe for people.

At AXA INK we keep environmental care and human health at the centre of our chemical engineering approach. In line with our “More Than Colors” philosophy, we develop ink for digital textile printing not just as a liquid that gives colour, but as an intelligent chemical component that optimises resource use, protects human health and respects nature.



OEKO-TEX® Certified Ecological Safety

All AXA INK ink formulations are produced in line with OEKO-TEX® standards. With an ecological composition free of heavy metals, harmful chemicals and allergenic substances, they deliver complete reliability in every textile that touches human skin, from baby clothing to home textiles, from fashion to industrial carpet production.

Minimum Chemical and Water Waste

By eliminating conventional screen, stencil and cylinder washing processes, our digital printing technology minimises chemical waste and water consumption during production. Thanks to their high drying kinetics and surface efficiency, AXA INK inks keep the environmental footprint of production lines to a minimum.

Preventing Ink Waste from Maintenance

Our patented surfactant formulation and anti-clogging technology balance solvent evaporation at the nozzle tip and deliver “first-drop” reliability. This reduces the need for aggressive head-cleaning and purge-and-wipe cycles, preventing litres of ink from being wasted and waste liquid from forming at every maintenance.

Zero Fabric Waste Through Flawless Print Precision

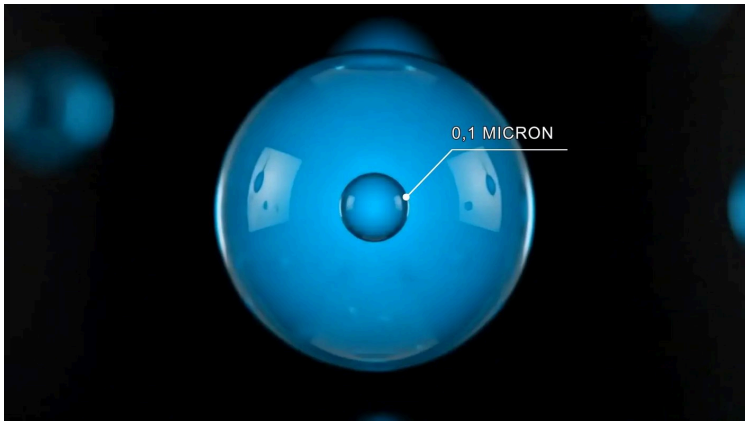
With Nano-Milling technology, pigment particle size is held under nanometric control at 0.1 µm (100 nm). Zero head-outs and flawless circular dot geometry eliminate misprints and fabric waste, preventing the waste of raw material.

CERTIFICATIONS AND COMPLIANCE

TECHNOLOGY

Engineering discipline in ink chemistry.

We answer the high-speed, zero-defect demands of modern digital textile printing not with a consumable, but with intelligent chemical components that optimise the lifetime and efficiency of the print system.



TECHNOLOGY VISION

The 3 Foundations of AXA Inks

We combined experience- and know-how-driven production with superior R&D agility and global technological precision. Combining 30 years of inkjet experience with chemical engineering discipline, we answer the demand for high speed and zero defects.

01

Precision in Color Technology

Molecular-level accuracy and spectral consistency across all industrial production batches, eliminating colour deviation.

02

Innovation in Nano-Ink

Proprietary 0.1 µm nano-dispersion processes that maximise ink stability well beyond current industry standards.

03

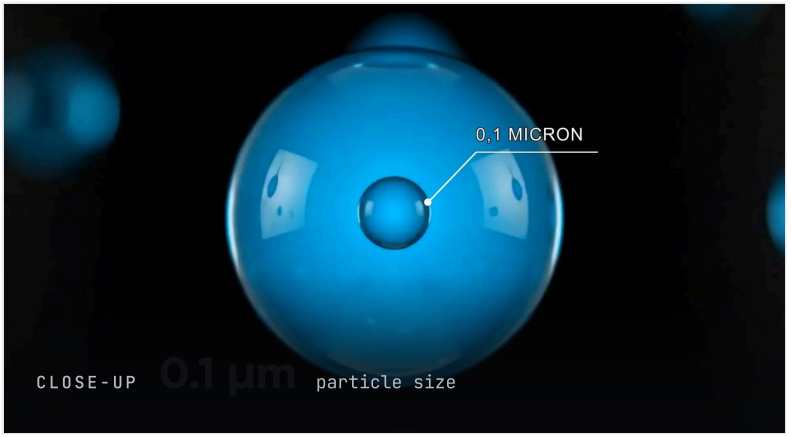
Operational Engineering

High-stability formulations engineered specifically to minimise industrial downtime (zero head-outs) and maximise throughput.

INSIDE THE INK

Small Particle, Great Precision

Zoom from a human hair to a printhead nozzle, then down to an AXA INK pigment particle. Particle size is 0.1 µm (100 nm), and the nozzle-to-particle ratio is optimised to prevent mechanical wear and satellite droplets.



FIELD OF VIEW — 160 MM → 0,4 MM



01
Human hair — ~70 µm



02
Printhead nozzle — ~25 µm



03
Red blood cell — ~7.5 µm



04
AXA INK particle — 0.1 µm

Illustrative scale. Typical piezo nozzle diameter ≈ 20–30 µm.

PROPRIETARY PROCESS

Nano-Milling.

The fundamental difference between AXA INK formulations and the competition is our proprietary Nano-Milling process. Milling pigment particles is not just size reduction — it is an engineering operation that also governs sedimentation resistance.

0.1 µm
Particle size

0.2 µm
Absolute filtration

0.1 µm

Nanometric particle size

Particle size is held at 0.1 µm (100 nm). Optimising the nozzle-to-particle ratio prevents mechanical wear and minimises satellite droplets breaking away from the main drop.

Anti-Clog

Fluid dynamics

Our patented surfactant formulation holds meniscus stability at the nozzle plate, balancing solvent evaporation for first-drop reliability even after long idle periods.

Rheology

Surface tension & viscosity

Produced under dynamic surface tension control, our inks keep a stable drop geometry even during high-frequency jetting.

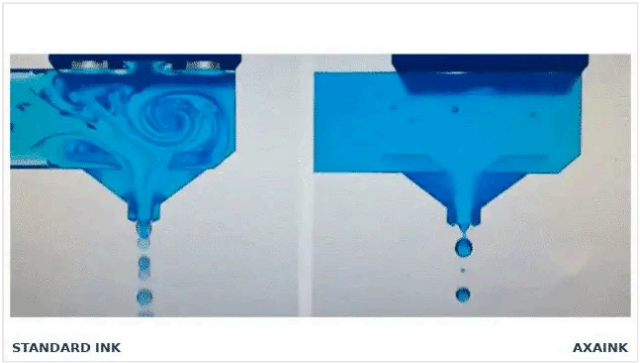
PRINT QUALITY

Go Beyond Standard Digital Printing

Nanometric particle distribution and controlled spreading make a visible difference on fabric.



Left, AXA INK: round, crisp and separated dots. Right, standard pigment: wicking along the fibre, bleed and colour mixing.



ANIMATED COMPARISON

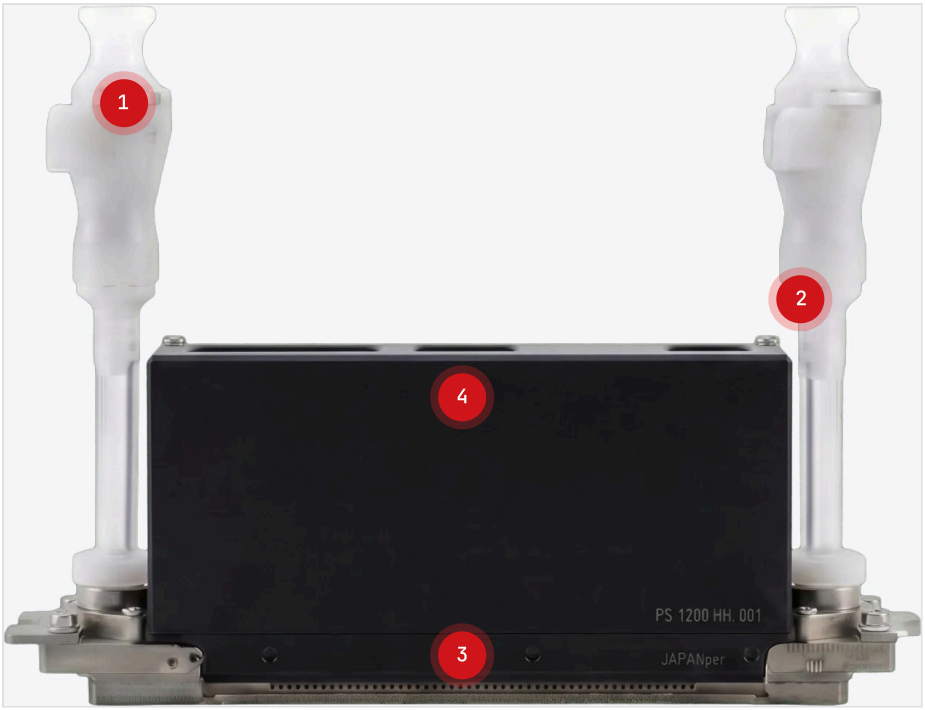
Standard ink vs AXA INK

Left: turbulent flow and scattered satellite droplets. Right: laminar flow and stable drop geometry.

AXA INK ADVANTAGES

Tailored Solutions for Your Digital Printing Needs

Our customers' hardware safety comes first. From filtration to drop formation, dot quality to thermal stability, every parameter is engineered for printhead lifetime.



FOUR LAYERS OF PROTECTION

Engineered to protect your printheads.

01 **Filtration protection**

0.2 µm absolute filtration keeps particles and agglomerates out of the ink channels.

02 **Material compatibility**

Formulated to be compatible with the printhead's adhesives, seals and nozzle-plate coatings.

03 **Nozzle plate care**

Tightly controlled sub-micron particle size protects the nozzle plate from abrasion.

04 **Thermal stability**

Viscosity and surface tension stay stable at printhead operating temperature for consistent jetting.

INSIDE THE NOZZLE

Clean drop formation.

When viscosity and surface tension are tuned to the printhead waveform, every drop breaks away from the nozzle as a single clean droplet.



UNOPTIMIZED INK · RESULT

Unstable jetting

Poorly balanced viscosity and surface tension produce long tails, satellite drops and misfires at high firing frequencies.



AXA INK · RESULT

Stable, uniform drops

Rheology tuned to the printhead waveform: each drop breaks off cleanly as a single droplet, with consistent volume and placement, even at high frequencies.

UNDER THE MAGNIFIER

Sharp dots.
Clean edges.

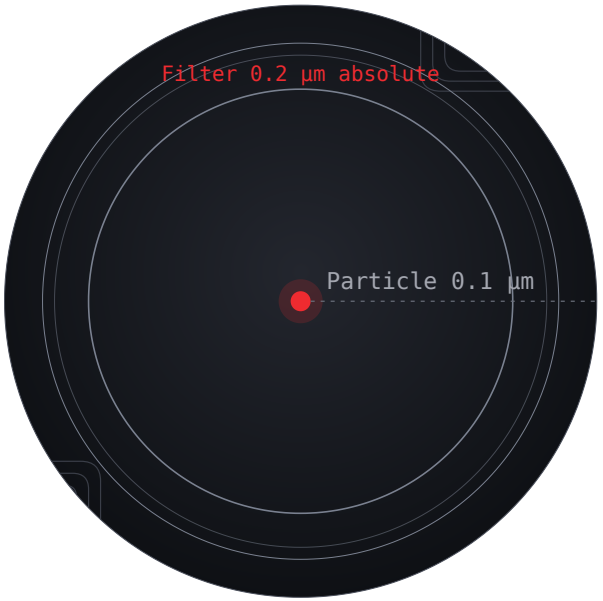
Controlled spreading on the fibre keeps dots round and edges crisp. See the Print Quality page for the comparison with standard pigment.



PARTICLE ADVANTAGE

0.2 µm
precision filtration.

AXA inks pass through dedicated filters with a 0.2 micron absolute rating. No particulate matter capable of causing a blockage reaches the piezoelectric architecture.



IN SUMMARY

What AXA INK delivers for digital printheads.

- Low maintenance cost
- Maximised industrial printhead lifetime
- Zero-abrasion fluid profile suited to precision nozzle-plate architecture
- High resolution in fine detail with flawless jetting
- Maximum production speed — zero head-outs on long runs
- Polymer compatibility stabilised against chemical aggression
- Long-term colour consistency through chemical stability



AXA INK / INK PORTFOLIO

Color Engineering & Sustainable Quality

Application-specific ink formulations for color precision and production continuity. We offer application-specific solutions across the textile industry with Direct Pigment, DTF, DTG, Dye Sublimation and Dye Disperse inks.



Premium fashion and home textiles. Flawless colour transitions with 10-colour gamut extension.



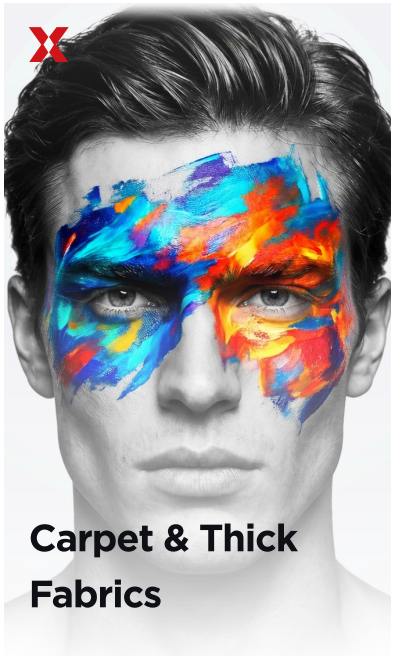
Garment transfer printing. High opacity on dark grounds and superior polymeric flexibility.



Superior white opacity and excellent wash fastness in direct-to-garment printing.



Very vivid colour with enhanced transfer performance and high fastness.



A new series built for DOD jet printheads in industrial carpet and thick fabrics.



DIRECT PIGMENT

Direct Pigment Inks

Pigment inks for printing directly onto fabric, fixed by heat alone, with no steaming or washing.

10 colours · Gamut Extension

ABOUT THE SERIES

High UV, wash and rub fastness with an ultra-thin polymer layer that preserves fabric breathability for an exceptionally soft hand. A gamut extension strategy beyond conventional CMYKRGB plays a critical role in capturing Pantone spot colours and reducing gain in gradient transitions.

01

Simple, Dry Process

Print, heat-fix and finish. No steaming or washing means far less water and energy.

02

Multi-Fiber Versatility

Suitable for cotton, polyester and blends, from home textiles to fashion.

03

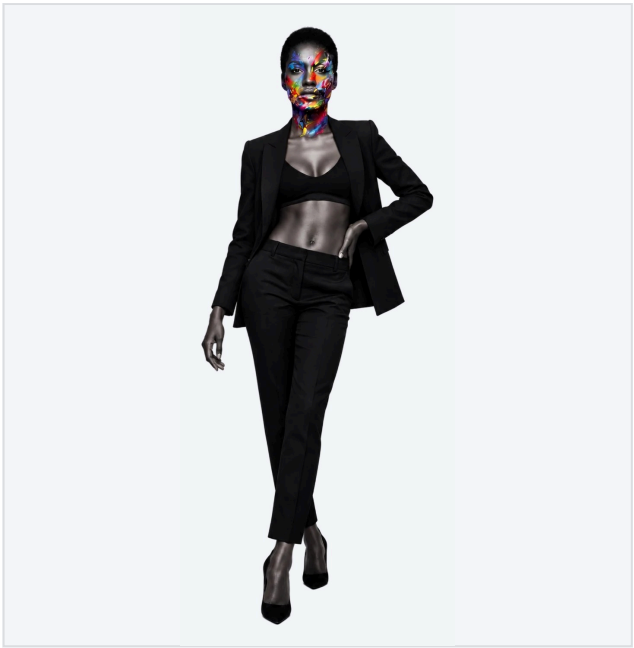
Reliable Fastness

A binder system formulated for good wash and rub fastness with a soft hand.

PACKAGING RANGE

Direct Pigment Inks





TECHNICAL DATA

COLOUR SET	Cyan, Magenta, Yellow, Black, Red, Green, Violet, Orange, Grey, Blue
OPTIONAL	12-colour configuration with Light Cyan and Light Magenta
FASTNESS	High UV, wash and rub fastness
HAND FEEL	Ultra-thin polymer layer; breathability preserved
FIXATION	Heat only — no steaming or washing
PRINT HEAD	Kyocera KJ4B, Epson i3200, S3200, Fujifilm Dimatix, Ricoh etc.
PARTICLE SIZE	0.1 µm — proprietary Nano-Milling
FILTRATION	0.2 µm absolute

APPLICATIONS

- Fashion
- Premium home textiles
- Cotton
- Polyester
- Blends

Request a quote for this series
info@axaink.com



DTF

DTF — Direct to Film

Pigment and white inks engineered for film transfers onto cotton, polyester and blends.

CMYKRGB + White

ABOUT THE SERIES

High elasticity modulus, a polymeric transfer structure and superior white opacity. Designed to meet every need in film transfer applications — always with excellent white coverage and vivid colour.

01

Stable White Ink

Controlled white pigment dispersion resists settling, keeping the white opaque and the printheads flowing.

02

Strong Wash Fastness

Bonds reliably with hot-melt adhesive powder for transfers that hold up to repeated laundering.

03

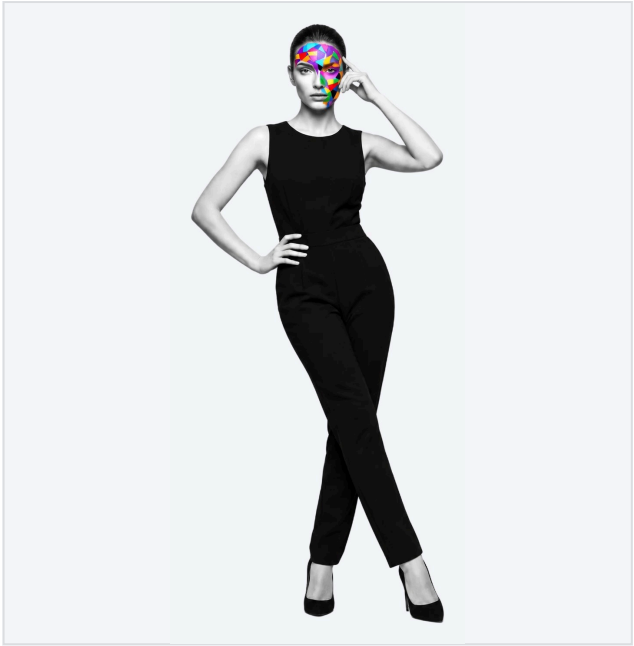
Soft, Flexible Hand

A thin, elastic ink layer that stretches with the garment without cracking.

PACKAGING RANGE

DTF — Direct to Film





TECHNICAL DATA

COLOUR SET	Cyan, Magenta, Yellow, Black, Red, Green, Blue + White
STRUCTURE	High elasticity modulus, polymeric transfer structure
WHITE	Superior opacity, settling-resistant dispersion
TRANSFER	Compatible with hot-melt adhesive powder
SUBSTRATES	Cotton, polyester and blends
PRINT HEAD	Epson i3200 etc.
PARTICLE SIZE	0.1 µm — proprietary Nano-Milling
FILTRATION	0.2 µm absolute

APPLICATIONS

Apparel · Dark grounds · Cotton · Polyester · Blends

Request a quote for this series
info@axaink.com



DTG

DTG — Direct to Garment

Water-based pigment inks for printing directly onto cotton and cotton-rich garments.

CMYKRGB + White

ABOUT THE SERIES

A high elasticity modulus, superior white opacity and excellent wash fastness deliver top performance in direct-to-garment applications.

01

Bright White Underbase

High-opacity white for vivid prints on dark garments, with a stable dispersion for reliable recirculation.

02

Vivid CMYK

A wide colour gamut with smooth gradients and sharp detail on pretreated cotton.

03

Wash Durability

A heat-cured pigment film that keeps its colour and softness through repeated washing.

PACKAGING RANGE

DTG — Direct to Garment





TECHNICAL DATA

COLOUR SET	Cyan, Magenta, Yellow, Black, Red, Green, Blue + White
STRUCTURE	High elasticity modulus; heat-cured pigment film
WHITE	High opacity for dark garments
FASTNESS	Excellent wash fastness
SUBSTRATES	Pretreated cotton and cotton-rich garments
PRINT HEAD	Epson i3200, Ricoh, Fujifilm Dimatix etc.
PARTICLE SIZE	0.1 µm — proprietary Nano-Milling
FILTRATION	0.2 µm absolute

APPLICATIONS

- T-shirts & apparel
- Dark garments
- Cotton
- Cotton-rich

Request a quote for this series

info@axaink.com



DYE SUBLIMATION

Dye Sublimation Inks

Sublimation inks for transfer printing onto polyester textiles and polyester-coated hard surfaces.

C M Y K

ABOUT THE SERIES

Thermal transfer efficiency, high molecular dye penetration and ultra-fine particle distribution — developed so that every print delivers perfect colour.

01

High Transfer Yield

Efficient sublimation delivers deep blacks and rich colours with less ink per metre.

02

Excellent Fastness

Strong light, wash and rub fastness on polyester for sportswear, flags and home textiles.

03

Production Reliability

Stable jetting in high-speed printheads for long, uninterrupted production runs.

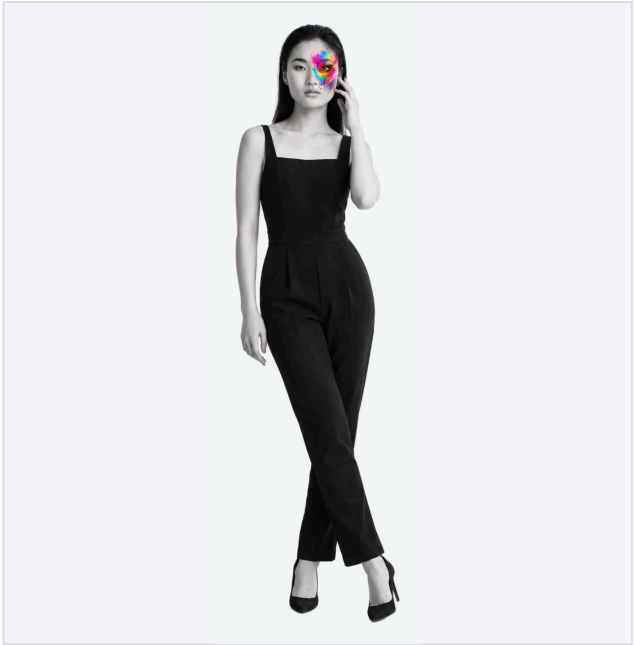
PACKAGING RANGE

Dye Sublimation Inks



TECHNICAL DATA

COLOUR SET	Standard colour group — Cyan, Magenta, Yellow, Black
TRANSFER	High thermal transfer efficiency
PARTICLES	Ultra-fine particle distribution
FASTNESS	Light, wash and rub
SUBSTRATES	Polyester textiles, polyester-coated hard surfaces
PRINT HEAD	Epson i3200, S3200, Kyocera KJ4B etc.
PARTICLE SIZE	0.1 µm — proprietary Nano-Milling
FILTRATION	0.2 µm absolute



APPLICATIONS

- Sportswear
- Flags & display
- Home textiles
- Hard surfaces

Request a quote for this series
info@axaink.com



CARPET & THICK FABRICS NEW SERIES

Dye Disperse — Carpet & Tick Fabrics

Engineered specifically for the heavy demands of industrial carpet and upholstery manufacturing.

All spot colours

ABOUT THE SERIES

Our Dye Disperse inks for digital printing of carpet and other thick textiles are developed for DOD jet printheads, with excellent deep-fibre penetration and colour fastness. All spot colours are available.

01

Deep Penetration

A high-penetration formulation carries dye deep into heavy, dense industrial textile fibres.

02

Extreme Colour Fastness

Formulated to withstand demanding environmental conditions, industrial washing and aggressive mechanical wear.

03

Vibrant Saturation

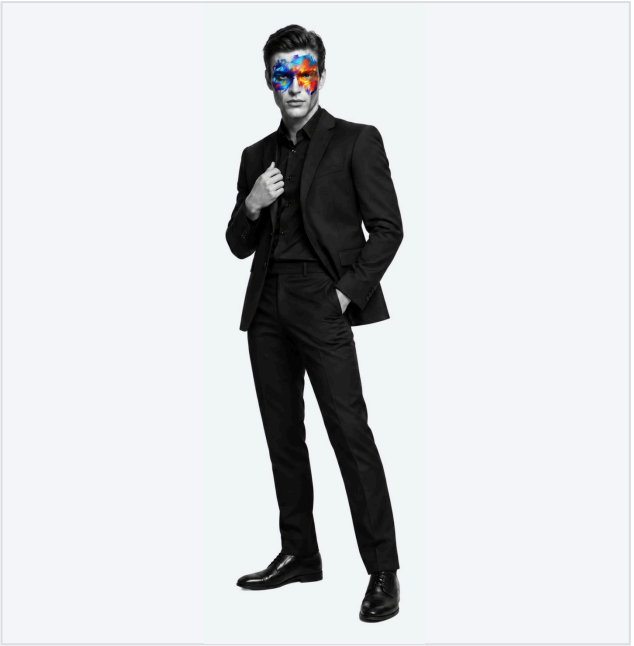
High-density colour spaces, calibrated specifically for heavy flooring materials.

PACKAGING RANGE

Dye Disperse — Carpet & Tick Fabrics

Cyan Magenta Yellow Black Red Green Blue Orange Violet

All spot colours — formulated to your specification



TECHNICAL DATA

COLOURS	All spot colours available
PENETRATION	Deep fibre penetration
FASTNESS	High colour fastness
SUBSTRATES	Industrial carpet, upholstery, tick fabrics and heavy textiles
PRINT HEAD	DOD JET (Zimmer etc.)
PARTICLE SIZE	0.1 µm — proprietary Nano-Milling
FILTRATION	0.2 µm absolute

APPLICATIONS

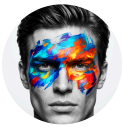
- Industrial carpet
- Upholstery
- Tick fabrics
- Heavy textiles

Request a quote for this series
info@axaink.com

SERIES SELECTION GUIDE

The right series for your application.

A summary table to find the right series for your printhead, fabric type and application. Common to all: 0.1 µm particle size, 0.2 µm absolute filtration.

SERIES	COLOUR SET	PRINT HEAD	SUBSTRATES	APPLICATIONS
 **Direct Pigment** Direct Pigment Inks	10 colours · Gamut Extension	Kyocera KJ4B, Epson i3200, S3200, Fujifilm Dimatix, Ricoh etc.	Cotton, polyester and blends	Fashion · Premium home textiles · Cotton · Polyester · Blends
 **DTF** DTF — Direct to Film	CMYKRGB + White	Epson i3200 etc.	Cotton, polyester and blends	Apparel · Dark grounds · Cotton · Polyester · Blends
 **DTG** DTG — Direct to Garment	CMYKRGB + White	Epson i3200, Ricoh, Fujifilm Dimatix etc.	Pretreated cotton and cotton-rich garments	T-shirts & apparel · Dark garments · Cotton · Cotton-rich
 **Dye Sublimation** Dye Sublimation Inks	C M Y K	Epson i3200, S3200, Kyocera KJ4B etc.	Polyester textiles, polyester-coated hard surfaces	Sportswear · Flags & display · Home textiles · Hard surfaces
 **Carpet & Thick Fabrics** NEW SERIES Dye Disperse — Carpet & Tick Fabrics	All spot colours	DOD JET (Zimmer etc.)	Industrial carpet, upholstery, tick fabrics and heavy textiles	Industrial carpet · Upholstery · Tick fabrics · Heavy textiles

CONTACT

The right formulation for your print line.

Tell us your printhead, fabric type and production volume — our technical team will recommend the right series and send samples.

EMAIL

info@axaink.com

ADDRESS

Veliköy OSB No 2-5, Çerkezköy, Tekirdağ, Türkiye



SAMPLES AND QUOTATIONS

Please include in your request

- Full name
- Company
- Email
- Country
- Series of interest
- Printhead / machine model
- Your message

Your request goes to our technical team; we usually reply within one business day.

PRINTHEADS Epson Kyocera Ricoh Fujifilm

AXA INK
More Than Colors

More Than Colors.

Nano-pigment ink technologies for industrial digital textile printing.
An affiliate of Artemisia Chemical Technologies.

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