ARCHROMA

LIFE ENHANCED

PASSION FOR NONWOVEN

Best-in-class innovations, products and system solutions

CREATING SUSTAINABLE SOLUTIONS

At Archroma, we continuously challenge the status quo in the deep belief that we can make our industry sustainable.

Archroma is committed to developing innovative products and processes that are safer for the consumer and for the environment. We strongly believe, based on our extensive experience in textile processing, that sustainability can generate innovation, performance and often lead to cost reductions and added value for our customers. For this reason, our clear ambition is to offer our customers the best possible system for their textile segments.

Innovation is a core competence of Archroma, which ensures that our products and services meet future demands, foster future technologies and contribute to a more sustainable textile industry.

As a global leader in color and specialty chemicals with a trusted heritage, we offer bespoke product solution systems and innovations. We strive to be a reliable partner for textile mills as well as major retailers and brands for the whole textile chain – **from the first idea to the final article.**

Brand owners and retailers around the world are taking action to evaluate the environmental impact of textile treatment, dyeing and finishing processes in response to consumer concerns. We can support textile manufacturers with this. Our exclusive ONE WAY Process Simulator can be used to simulate and compare products and processes, and thus calculate the ecological and economical profile of the final end-product.

ABOUT US

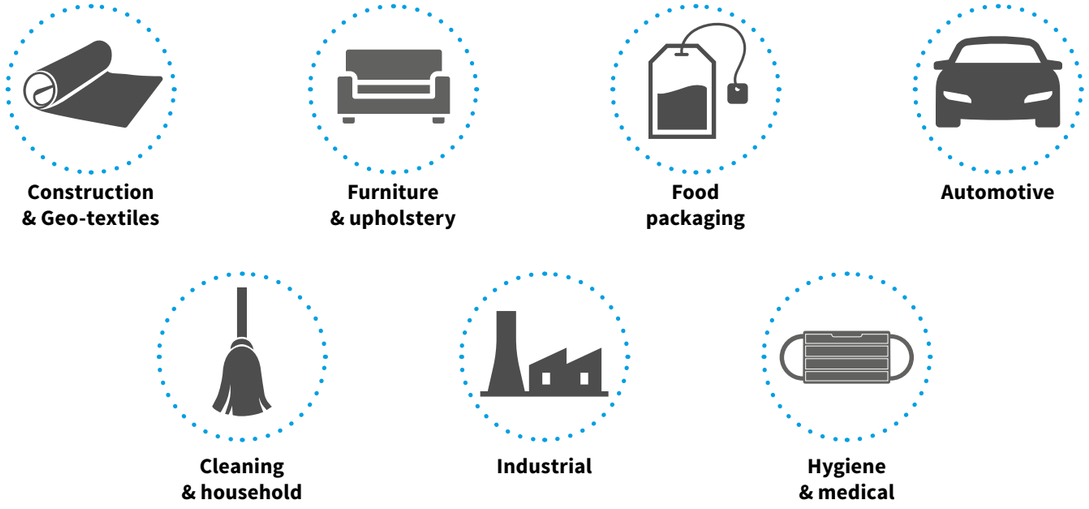
Archroma is a **global color and specialty chemicals** company committed to innovation, world-class quality standards, high service levels, cost-efficiency and sustainability.

At Archroma, **we share your passion for nonwoven,** and we bring our expertise, innovation power and our commitment to sustainability into developing cutting-edge technologies and products to support your needs.

Day by day the use of nonwoven fabric is increasing and without them our present life would become so incomprehensible. Principally, there are 2 types of nonwoven fabric: Durable & Disposal. Around 60% of nonwoven fabric are durable and rest 40% are disposal.

These technical textiles are perfect for a large number of applications and markets including the **hygiene, industrial, medical, construction, furniture, household, automotive and food packaging.**

MARKET BY APPLICATION



With the rise of COVID-19 cases, **demand for hygiene & medical products** made of nonwoven fabric (such as: surgical masks, surgical caps, PPE, medical apron, shoe covers etc) have **increased up** to 10x to 30x in different countries.

Based on experiences in food packaging and food processing industry, Archroma offers and provides **food contact compliant binders and additives** which fulfill your technical requirements. Food contact information sheets are available on demand.

Today, nonwovens are expected to provide increasingly high performance while saving cost and energy in processing and use. Producers and consumers are looking for safe and health-compatible products.

FIBER SPINNING

The quality and functionality of a nonwoven is essentially influenced by the type of fiber, the applied spin finish product, the manufacture of the nonwoven web and the type of bonding used.

Archroma's spinning agents

For nonwoven production using PET, PLA or viscose staple fibers, going into hygiene, sanitary, food contact or technical applications

Leomin® PN60 pa
Antistatic agent
Based on FDA listed components

Leomin® LSN liq
Lubricant and antistatic agent
Strong fiber-fiber cohesion

Afilan® V5066 liq
Lubricant and cohesion agent
Based on FDA listed components

Afilan® HSG-V solid
Lubricant agent
Extraordinary fiber-fiber cohesion

Afilan® CFA100 liq
Lubricant and cohesion agent
Based on FDA and EU 10/2011 listed components

Trefix® SLB liq
Boundary lubricant agent
Surface protection

BINDERS

Archroma offers a wide range of water-based binders to improve and modify dimensional stability, stiffness and softness, mechanical properties, and resistances (water, solvent, abrasion, …) of nonwovens.

These nonwoven binders are compatible with a wide range of fibers from natural materials such as cotton to synthetic materials, including polyester and polypropylene.

Archroma's formaldehyde-free* binders for advanced nonwovens

Acrylic copolymers partially based on renewable raw materials

New generation of water-based binders that relies more on the natural materials that surround us and less on classical petroleum based raw materials, helping to reduce the impact on climate change, eco-system, human health and resources

Biocide free and formaldehyde-free*, excellent film forming property, hydrophobic, high crosslinking capability, **food contact compliant** (FDA 176.170, BfR XXXVI and XXXVI-1). Compostable according to EN 13432

Appretan® NTR6304 liq
Tg -10°C, 42%, 40% renewable raw material

Appretan® NTR6553 liq
Tg +15°C, 40%, 30% renewable raw materials

Tea bags and coffee pads & filters, food filtration nonwoven, papers, technical fabrics and nonwovens

Acrylic copolymers

Formaldehyde-free* range that cover a wide diversity of applications and requirements, which can be self-crosslinking. Possible enhancement with external formaldehyde-free* crosslinkers

X types are self-crosslinking and have a low temperature curing profile

Appretan® FF2100 liq
Tg -30°C, 60%, self adhesive

Appretan® FF6230 liq
Tg-17°C, 50%, low VOC/fogging

Appretan® FFX6270 liq
Tg -13°C, 50%, very soft and elastic

Appretan® FF6400 liq
Tg 0°C, 50%, soft, low stickiness, low emission

Appretan® FF6500 liq
Tg +10°C, 50%, medium soft, low emission, heat sealable

Appretan® FF6620 liq
Tg +22°C, 50%, low emission, heat sealable

Appretan® FFX2730 liq
Tg +33°C, 50%, low HHV, high adhesion on glass

Appretan® FFX6730 liq
Tg +33°C, 50%, excellent abrasion resistance

Appretan® FFX6750 liq
Tg +35°C, 50%, high water and solvent resistance

Appretan® FF2110 liq
Tg +70°C, 40%, very stiff, anti-blocking agent

Lamination, chemical bonding of nonwovens, blackout coating, glass veils, automotive, building applications, technical nonwovens.

Formaldehyde-free
Below limits of detection according to industry standard test methods

Partially bio-based

Food contact compliant

> Spotlight on NATURE BOUND, a compostable binder system for food filtration materials that protect you and the planet.

Discover more information in our NATURE-BASED POLYMERS brochure for food contact.

Archroma's binders for advanced nonwovens

Ultra Low Formaldehyde acrylic copolymers

Polymers from the Appretan® E range are self-crosslinking to achieve the high level of performance required for technical application (water/solvent/alcohol resistance), while meeting the requirement of non detectable formaldehyde (less than 16 ppm according to Japan Law 112-1973) on the substrate

Appretan® E6200 liq
Tg -20°C, 50%, soft elastic styrene/acrylic

Appretan® E4250 liq
Tg -15°C, 50%, soft elastic hydrophilic vinyl/acrylic
BfR XXXVI compliant

Appretan® E6400 liq
Tg 0°C, 50%, medium soft styrene/acrylic
BfR XXXVI, FDA 176.170 and 176.180 compliant

Chemical bonding of nonwovens, wall covers and glass veils, adhesive for flocking, blackout curtain and blinds, cleaning rags & wipes, technical nonwovens

Appretan® E6441 liq
Tg +4°C, 50%, medium soft styrene/acrylic

Appretan® E6541 liq
Tg +14°C, 50%, medium stiff hydrophilic styrene/acrylic, BfR XXXVI compliant

Appretan® E6680 liq
Tg +28°C, 50%, stiff styrene/acrylic
BfR compliant

Acrylonitrile/acrylic copolymers

Acrylonitrile/acrylic copolymers show enhanced solvent & dry-cleaning resistances, making them ideal for various applications where such durability is required

The acrylonitrile/acrylic copolymers have the unique property of being soft and elastic, while having a limited stickiness, making them suitable for coating application where softness and low tackiness are required.

Due to their nitrogen content, acrylonitrile containing copolymers shows an enhanced efficiency when used in combination with flame retardants, that makes them particularly suitable for FR applications.

Lurapret® DS151 liq
Tg -36°C, 50%, very soft and highly elastic, core-shell technology, low tackiness

Lurapret® FF8250 liq
Tg -15°C, 50%, very soft and highly elastic, core-shell technology, low tackiness, non-self-crosslinking

Formaldehyde-free
Below limits of detection according to industry standard test methods

Lurapret® D 579 liq
Tg +7°C, 50%, medium soft and elastic, allrounder for blackout in hot climates

Lurapret® D 888 liq
Tg +31°C, 50%, good hot tensile strength

Chemical bonding of nonwovens, interlining, spunbond for roofing, needle felt and needle-punched webs, blackout coating, flock adhesive with reduced flammability

> Spotlight on FILTER IT CLEAN, a formaldehyde-free* and APEO-free* bonding system that makes nonwovens strong and safe, even when wet.

Archroma's binders for advanced nonwovens

Self-crosslinking acrylic copolymers

Acrylic copolymers	Vinyl/acrylic copolymers	Styrene/acrylic copolymers
Excellent water and solvent resistances as well as stability to UV, light and temperature	Strongly hydrophilic copolymers with good water and medium solvent resistances. Highly stabilized and self-foaming	Strongly hydrophobic with excellent water and solvent resistances, as well as resistance to alkalis, acids, and chemicals
Appretan® N92100 liq Tg -30°C, 45%, high solvent resistance	**Appretan® NI liq** Tg -20°C, 45%, nonionic, improved compatibility with cationics	**Appretan® N96100 liq** Tg -20°C, 50%, very soft, highly elastic and resilient
Appretan® N92111 liq Tg -8°C, 50%, soft, elastic, excellent wash and dry-cleaning resistance	**Appretan® N94101 liq** Tg -15°C, 50%, soft and elastic, strongly hydrophilic	**Appretan® N96101 liq** Tg -17°C, 50%, soft, elastic and low tackiness
Appretan® N92121 liq Tg +10°C, 50%, medium soft	**Appretan® N94121 liq** Tg +27°C, 50%, medium stiff	**Appretan® PL10073 liq** Tg -10°C, 50%, excellent wetting and low migration profile
Appretan® DS 703 liq Tg +24°C, 50%, excellent UV stability and no thermo-yellowing	**Appretan® N94151 liq** Tg +38°C, 50%, stiff, good film forming property	**Appretan® N96131 liq** Tg +28°C, 50%, stiff
Appretan® N92131 liq Tg +26°C, 50%, stiff		**Appretan® N96131 SB liq** Tg +28°C, 50%, stiff, improved tensile strength at high temperature
Appretan® N92151 liq Tg +45°C, 50%, very stiff		**Appretan® N9616 liq** Tg +47°C, 50%, very stiff
Chemical bonding of nonwovens, interlining, waddings, blackout coating	Needle-punched nonwovens, cleaning rags & wipes, waddings	Needle-punched nonwovens, glass nonwovens, blackout coating

> Spotlight on RAG N'ROLL, a compostable binder system for nonwoven cleaning rags, that protect you and the planet

Archroma's binders for advanced nonwovens

Vinyl acetate homopolymers

Vinyl acetate homopolymers are stabilized with protective colloids, this makes them non-ionic and gives them an excellent compatibility with other chemicals particularly electrolytes

Being formaldehyde-free* and non-self-crosslinking, they have a medium resistance to water and are readily soluble in solvents. Due to their chemistry and stabilization, they show an excellent adhesion on various substrates, and particularly on glass fibers

Appretan® MB Extra liq
Tg +10°C, 55%, medium disperse, viscous, plasticized

Appretan® TTL liq
Tg +33°C, 50%, low disperse, low viscous (< 2000 mPa.s)

Appretan® TS liq
Tg +33°C, 55%, medium disperse, viscous

Stiffening agents, handle modifiers, wet lamination, glueing, heat sealing, glass fiber finish.

Aliphatic polyurethanes

Based on polyether, -ester and –carbonate copolymers these aqueous dispersions provide excellent UV and light fastness, good hydrolysis resistance, and low thermal yellowing. Their elastomeric character qualifies them for the chemical bonding of technical nonwovens which need to maintain their dimensional stability and flexibility at extreme temperatures. Being formaldehyde-free and non-self-crosslinking, they may be combined with a reactive crosslinking agent to improve durability and fastness

Polyether PU	Polyester PU	Polycarbonate PU
Lurapret® N5112 liq 35% medium soft high hydrolysis resistance low water absorption	**Lurapret® N-DPS liq** 40% soft and highly elastic polyvalent PU with high thermal stability acid and electrolyte stable	**Lurapret® N5392 liq** 60% soft and elastic TEA free, low VOC resilient foam coating
Specialty PU	**Lurapret® N6076 liq** 40% medium stiff and low elastic excellent adhesion & abrasion resistance	
Texapret® D-AK liq 45% medium stiff low softening point		

Formaldehyde-free
Below limits of detection according to industry standard test methods

FUNCTIONAL ADDITIVES

Archroma offers a versatile functional additives portfolio, allowing high and diversified functionalization of the binders and of your nonwovens, resulting in high added values and performances.

Archroma's functional additives

Crosslinkers

Enhance general properties of the binders, like water and solvent resistances, as well as temperature resistance and durability

Cassurit® LFC liq
Low formaldehyde MF resin (below 0.1%)

Arkophob® DAN New liq
Blocked isocyanate, butanonoxime-free

Arkophob® XLR liq
Reactive polyisocyanate, suitable for low temperature curing

Cartabond® NY liq
Hydroxylated crosslinker for hydroxy-functional polymers, food contact compliant

Cartabond® EZI liq
Zirconium based crosslinker, for carboxylated polymers, food contact compliant

Fixapret® ELF liq c
DMDHEU crosslinker for hydroxy-functional polymers and cellulosics, low formaldehyde (below 0.1%)

Arkofix® NZF New liq
DMeDHEU crosslinker for hydroxy-functional polymers and cellulosics, formaldehyde-free*

Hydrophilic agents

Increase moisture and water absorption and penetration of liquids and solvents

Hydroperm® SRHA liq
Modified polyester copolymer with antistatic and soil release properties, preferably used for polyester fibers

Hydroperm® RPU New liq c
Thermoreactive polyurethane resin, preferably used for cellulosic fibers

Repellents

Provide oil (FC), water and soil protection, and reduce water absorption and penetration of liquids and solvents

Nuva® N2155 liq
Nonionic fluoropolymer with WOR properties

Nuva® N6336 liq
Slightly cationic fluoropolymer with WOR properties, food contact compliant

Smartrepel® Hydro TS liq
Fluorine free water repellent agent, improves water resistance of polymer binders

Smartrepel® Hydro LDS liq
Fluorine free water repellent agent, high temperature resistance, release effect

Cartaseal® VWAF liq
Fluorine free water and grease repellent, formaldehyde-free* and food contact compliant

Formaldehyde-free*
PFC free*
* Below limits of detection according to industry standard test methods

Archroma's functional additives

Antimicrobial agents

Protect nonwoven and polymers from bacteria, fungi and mold staining

Sanitized® AM 23-24
Non-ionic permethrin dispersion with excellent vector protection against mosquitoes, ticks, dust mites and bed bugs

Sanitized® TH 26-11
Non-ionic thiazol derivative, halogen-free. Antifungal finish for Technical Textiles

Sanitized® TH 27-24
Anionic zinc pyrithione slurry. Effective against a broad range of bacteria, mildew and mold, providing indirect dust mite protection

Sanitized® T 11-15
Anionic silver salt/polymer compound. Hygiene and odor control for nonwoven with direct skin contact

Cationic fixatives

Provide color catching effect when combined with binders for color catching wipes

Optifix® 0701E liq
Polyamidoamine

Optifix® F liq
Aliphatic polyamide derivate

Cartaretin® F liq
Polyamide-amine resin

Partially bio-based

Softeners/Surface modifiers

Modify surface properties, softness and harshness of binders and nonwovens

Siligen® EH1 liq
Non-ionic hydrophilic macro-emulsion silicone, high amount of bio-based raw material

Solusoft® NUP liq
Non-ionic macro-emulsion silicone

Solusoft® NMW liq c
Non-ionic micro-emulsion silicone

Ceralube® PHD liq c
Non-ionic/amphoteric PE emulsion

Ceralube® PEP liq c
Non-ionic PE emulsion, fine disperse

Flame retardants

Reduce flammability of polymer binders and nonwovens

Pekoflam® TC950 liq
Aqueous slurry of a low soluble metal phosphinate salt

Pekoflam® TC203 p
Standard grade polyphosphate powder

Pekoflam® TC503 p
Intumescent system based on polyphosphate powder

Pekoflam® OP liq
Organic phosphate salt for cellulosics and blends, low hygroscopic effect and low fogging

Pekoflam® MSP liq
Ammonium phosphate salt for cellulosics and blends, high compatibility with polymers, OekoTex 100 registered

PROCESS ADDITIVES

Whatever the application system, properties of binders and formulations need to be fine-tuned and adapted to ensure problem free processes. Archroma supports your industrial applications by providing efficient process additives.

Archroma's process additives

Wetting agents

Lower surface tension of the formulations and improve wetting properties, film formation, and adhesion

Kieralon® MRZ liq
Low foaming efficient wetting agent

Fluowet® UD liq
Non-rewetting wetting agent

Leonil® EHC liq c
Wetting agent with defoaming and de-aerating properties

Foaming agents

Provide suitable foam ability and properties to foam applications

Kieralon® SAS 30 liq
Alkyl sulfonate, gives coarse foams

Afilan® ADB1 liq
Betaine type, gives fine and stable foams

Afilan® AS-OS1 liq
Alkyl sulfonate, gives semi-coarse foams

Emulsifiers

Improve the running properties of formulations and avoid roller build-up and fast drying

Imerol® JET-B liq c
Low foaming emulsifier with wetting properties for impregnation

Luprintol® Emulsifier PE New liq c
Efficient and versatile emulsifier for coating and impregnation

Thickeners

Adjust viscosity and rheological behavior of the formulations to the application system

Appretan® Thickener 3308 liq
Inverse emulsion with a smooth behavior

Appretan® Thickener 2710 liq
Concentrated fully neutralized inverse emulsion

Cartacoat® RM 15 New liq
Efficient ASE thickener, food contact compliant

Defoamers

Reduce problematic foam development during coating and impregnation

Antimussol® UDF liq
Silicone based defoamer for coating and impregnation

Luprintol® Antifoam TC ECO liq
Silicone free defoamer for coating

Thermo-coagulation agents and migration inhibitors

Limit migration during application on thick nonwovens, or when coloration is done with pigments

Cartafix® U liq
Non-ionic alkoxylated fatty amine derivate based thermo-coagulant

> Spotlight on TAKE A BREATH, an enhanced filtration system that keeps your air clean and fresh for longer putting health first and your competition behind.

Discover more information about highest protection levels against the SARS-CoV-2 in our PASSION FOR HYGIENE & PROTECTION brochure.

Discover more information in our FUNCTIONAL FINISHING brochure.

COLORATION

Complementing all functional treatments, Archroma is also a recognized leader in **integrated solutions** for coloration. Our portfolio includes systems designed to match the specific requirements for all types of fiber-based goods.

Archroma's pigment dyeing

Binders

Water-based binders with excellent pad liquor stability to improve and modify softness, mechanical properties, and resistances (water, solvent, abrasion, …) of nonwovens

Perapret® CFF/FWT
Water-based binder
High wash durable
Highest light fastness
Soft
Suitable for hygiene & cleaning

Helizarin CFN liq®
Exhibits Good running properties in pad dyeing
Exhibits Good pad liquor stability
Very Good overall fastness
APEO free

Pigments

Water-based pigment preparation of highest quality, good fastness and great ecological profile

Printofix® T
Wide shade gamut
High stability of dispersion
Low viscosity
Highest light fastness
Excellent chlorine fastness

Printofix® TF
Top of fastness
Excellent light fastness
Excellent weather fastness
Excellent chlorine fastness

Cartaren® Black, Blue, Violet
Specialty pigments for paper, packaging and food processing nonwovens compliant to BfR XXXVI and selected FDA sections

Black carbon dispersions which provide coloration combined with high electrical conductivity

Appretan® Black RES 01 liq
Medium concentrated conductive black

Texapret® Black C RES 02 liq
Concentrated low viscosity conductive black with reduced VOC

Suitable for articles that need chlorine fastness. Tests required on final product

Compliant to BfR XXXVI and selected FDA sections

Conductive properties

Our wide portfolio of **pigment printing preparations and auxiliaries,** places Archroma in the position to offer complete **printing system solutions** that obtain vibrant colors in most fields of textile printing applications.

Archroma's pigment printing

Pigments

Water-based pigment preparation of highest quality, good fastness and great ecological profile

Printofix® T
Wide shade gamut
High stability of dispersion
Low viscosity
Highest light fastness
Excellent chlorine fastness

Printofix® TF
Top of fastness
Excellent light fastness
Excellent weather fastness
Excellent chlorine fastness

Printing auxiliaries

State-of-the-art

Binders
Helizarin® SFT liq c
Helizarin® TOW liq
Helizarin® SF liq
Helizarin® ET liq
Helizarin ® CN plus liq

Thickeners
Lutexal® CSN liq
Lutexal® CSFN liq
Lutexal® HIT Plus liq
Lutexal ®F-HIT liq

Softeners
Luprintol® Soft VSN liq
Luprintol® Soft SIG liq

Pastes
Helizarin® White RT pa
Helizarin® Ultra-fast Paste
Helizarin® Ultra-fast Supreme pa

Improvers and problem solvers
Luprintol® Emulsifier PE New liq
Luprintol® Emulsifier F-PE liq
Luprintol® Antifoam TC ECO liq
Luprintol® Additive RM liq

Fixing
Luprintol® Fixing agent SE liq
Luprintol® Fixing agent LFC liq
Luprintol ® MCL ECO liq

Printogen for dyes
Printogen Oxidant grains p
Printogen Enhancer BC liq
Printogen Compound RP liq

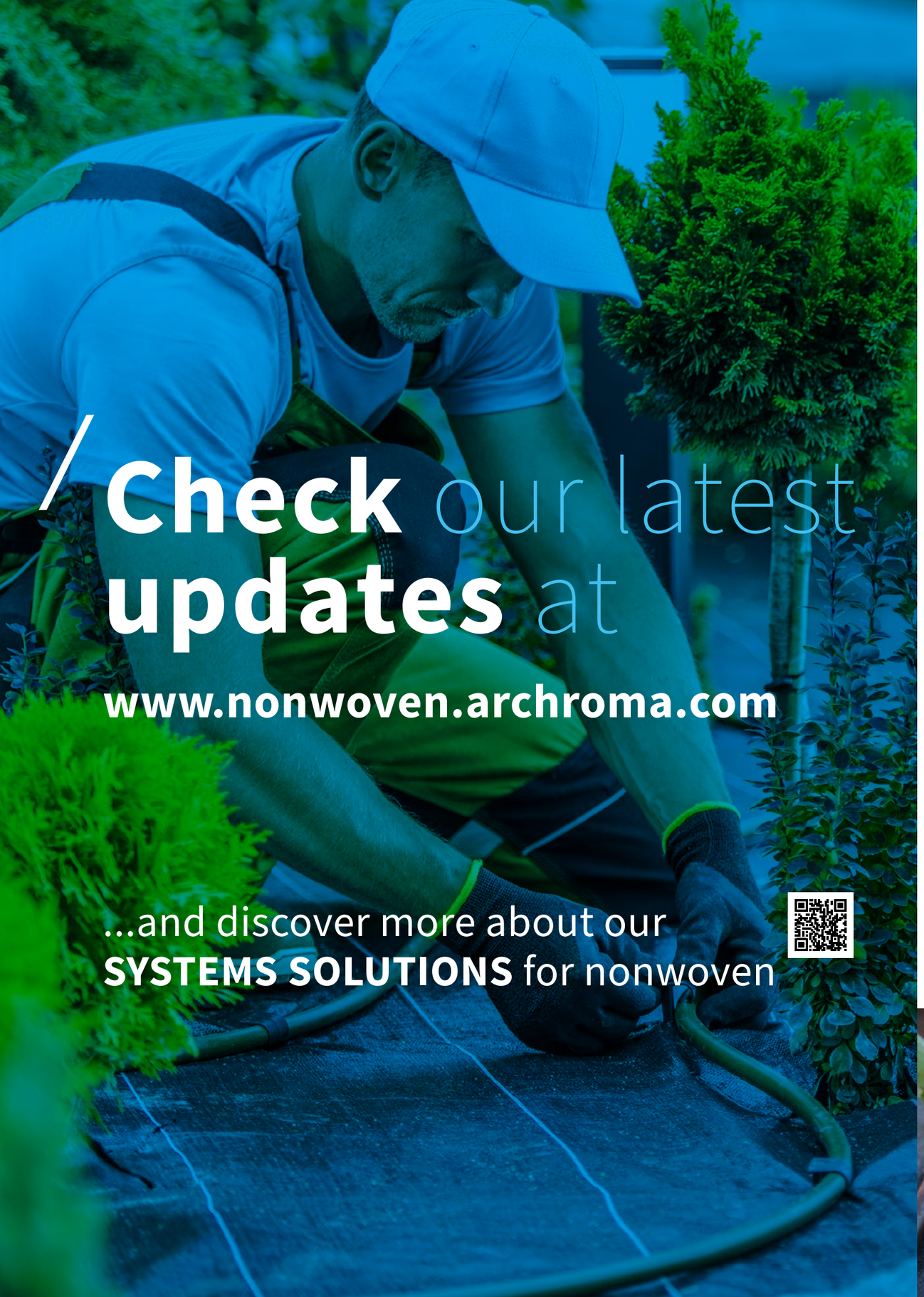
Suitable for articles that need chlorine fastness. Tests required on final product

> **Spotlight on JUST COLOR, a stress-free coloration system for cotton, polyester and blends, that allows to create brilliant pale to medium shades resistant to light and bleach… whilst using significantly less chemicals and water.**

In some cases, dyeing is carried out in a later stage. The nonwoven fabric is then treated as a woven or knitted fabric and is dyed in the traditional ways. Archroma delivers a comprehensive colorant portfolio with more than 600 dyes and pigments and selection of dyeing auxiliaries for each kind of dyestuff and application.

Discover more information about pigment, reactive, disperse & acid printing in our PASSION FOR PRINTING brochure.

Ask your Archroma representative for additional information on our coloration solutions



Check our latest updates at

www.nonwoven.archroma.com

...and discover more about our
SYSTEMS SOLUTIONS for nonwoven

THE ARCHROMA WAY TO A SUSTAINABLE WORLD

Safe, efficient, enhanced. It's our nature.

As a global leader in color and specialty chemicals, we are committed to develop innovative systems and services to provide you with custom solutions that are:

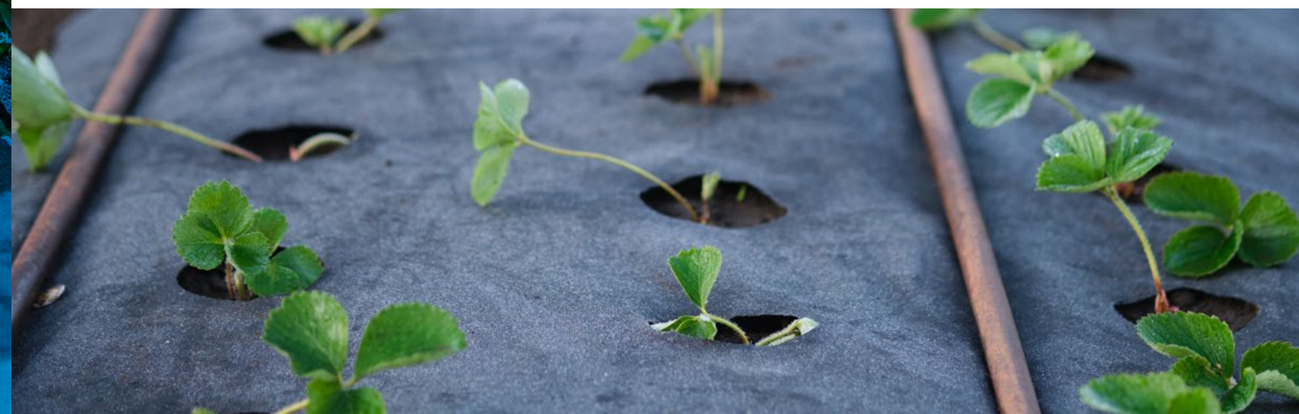
Safe – It's our nature to protect. Safe to use, safe to release and safe to wear.

Efficient – It's our nature to rethink sustainable manufacturing. Innovating application processes that minimize resources and maximize productivity.

Enhanced – It's our nature to add another level of value. Effects, functionality and aesthetics to give additional value, for a life enhanced.

Ask your Archroma representative for additional information on our system solutions

* Below limits of detection according to industry standard test methods



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CERTIFIED TO
SE EN ISO 9001:2015
SN EN ISO 14001:2015
SN EN ISO 45001:2018

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