

PASSION FOR FUNCTIONAL / Innovative and tailor-made solutions



How do we bring best-in-class expertise sustainabi and performant to functional finishes?

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.





OUTSTANDING FUNCTIONAL EFFECTS

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

From fiber to finish, Archroma plays a key role throughout the entire textile supply chain, with special system solutions for spinning, sizing, pretreatment, optical brighteners, dyeing printing and finishing.

At Archroma, we share your passion for functional

finishes, and we bring our expertise, innovation power and our commitment to sustainability into developing cutting-edge technologies and products to support your needs. Textiles are a huge part of our day-to-day lives. From the clothes we wear to the bedsheets we sleep on, there is a wide spectrum of applications for textiles and the functional needs for textiles can defer depending on the use. Textiles not only have to be soft, comfortable and easy to care but they also have to be waterproof, fire resistant, dimension-stable, antimicrobial, or provide long-term durability, to name just a few.

However, functionality alone is no longer enough to meet the requirements of millions of end-users. Aesthetics, design, color and ecology also need to be taken into consideration for life at home, at work or outdoors to be more secure, efficient and healthy, as well as a little bit more beautiful.

Archroma has specialized Competence Centers bringing to our customers:

- A hub of knowledge, R&D, expertise, technology and creativity support;
- A wide range of testing and consulting services in the synthetics & wool, cellulosics, printing, finishing & denim segments;
- A complete system offering thanks to our unique combination of expertise in spinning, pretreatment, coloration, as well as finishing;
- Access to global and regional knowledge and expert network for seamless support in global supply chain management;
- Powerful training centers for our affiliates, partners and customers.

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

The majority of Archroma's products are certified by some of the most important eco-standards such as:

• bluesign® • Oeko-Tex[®] • GOTS • ZDHC • REACH • EU Ecolabel • C2C • RSL • MRSL

Contents

| 6 | Arkofix [®] and Fixapret [®] | Low emissive of |
|----|--|-----------------|
| 8 | Hydroperm [®] and Sanitized ^{®1} | Moisture mana |
| 10 | Solusoft [®] , Ceralube [®] , Siligen [®] and others | Outstanding so |
| 12 | Smartrepel [®] and Nuva [®] N | State-of-the-a |
| 14 | Appretan [®] , Lurapret [®] and Texapret [®] | Enhanced stre |
| 20 | Cassurit [®] | High performa |
| 22 | Pekoflam® | Eco-advanced |
| 24 | Arkophob [®] , Fluowet [®] and others | Finishing spec |

Whether the need is for apparel, sports, leisure wear, decorative home textiles such as curtains, blinds, mattresses, high performance materials for protective wear and uniforms, nonwovens used for interlining, filters, medical sterilization materials or the automotive industry, Archroma's broad portfolio of innovative, effect-promoting finishes is highly valued among the technical textile sector for its focus on safety and ecology, as well as its contribution to improving manufacturing efficiency.

The possibilities are endless.

crease and shrink resistance

nagement and antimicrobial protection

softness

art repellence and release

ength, flexibility and durability

nance shape stabilization

d flame retardance

cialties and coating additives

LOW EMISSIVE CREASE **AND SHRINK RESISTANCE: ARKOFIX® AND FIXAPRET®**

Modern resin finishes make life easier for end-users. In response to growing market demand for easy-care and noniron finishes on cellulosic fibers, Archroma has developed a wide range of resins and catalysts as well as economical processes with an environmentally friendly focus. We provide tailor-made solutions for Moist-Cure, Premium LT-Cure, Easy-Care, Post-Cure, Strength-Management and formaldehyde-free finishes.

Fabrics treated with our ETSI (Enhanced Textile Strength Improvement) system retain their high quality and are significantly more durable, even after repeated home laundering.

| | 1 | |
|---------|------|---|
| 100 200 | | X |
| | e o | |
| aver | | |
| | JER. | |

| | PRODUCT PROPERTIES | | APPLIC/ PROPER | | APPLIC | ATION | | | FIBER T | YPE | | |
|---|---|------------|------------------------|---------------|--------------|---------------------|-------------|------------|------------|-----|----|------|
| PRODUCT | Brief description | Reactivity | Chlorine resistance | Japan Law 112 | Pad-Dry-Cure | Foam application | Garment dip | Moist Cure | Cellulosic | PES | PA | Wool |
| REACTANT RESINS – FOR | MALDEHYDE-FREE | | | | | | | | | | | |
| Arkofix* NZW liq | Dimethyl-dihydroxy-ethyleneurea, formaldehyde-free, best white | 000 | 0000 | n.d. | ••• | •• | •• | | ••• | • | • | • |
| Arkofix [®] NZF New liq | Dimethyl-dihydroxy-ethyleneurea, formaldehyde-free | 000 | 0000 | n.d. | | | | | | • | • | • |
| Arkofix [®] NZK liq | Dimethyl-dihydroxy-ethyleneurea, formaldehyde-free, pre-catalyzed | 000 | 0000 | n.d. | ••• | | | | | • | • | • |
| Arkofix [®] NF liq | Dimethyl-dihydroxy-ethyleneurea, formaldehyde-free | 000 | 0000 | n.d. | | | | | | • | • | • |
| Arkofix [®] WFF liq | Dimethyl-dihydroxy-ethyleneurea, formaldehyde-free | 000 | 0000 | n.d. | | | | | | • | • | • |
| REACTANT RESINS | | | | | | | | | | | | |
| Fixapret [®] CM liq c | DMDHEU, modified | 00 | 0000*3 | <75 ppm*2 | • | | | ••• | ••• | • | • | • |
| Fixapret [®] AMC liq c/ F-AMC liq | DMDHEU, modified | 00 | 0000*3 | <75 ppm*2 | • | | | | | • | • | • |
| Fixapret [®] ECL liq c | DMDHEU, modified | 00 | 0000 | <75 ppm | ••• | | • | | | • | • | • |
| Fixapret [®] ECO liq c | DMDHEU, modified | 00 | 000 | <75 ppm | | | • | | | • | • | • |
| Fixapret [®] F-ECO liq | DMDHEU, modified | 000 | 0 | <75 ppm | ••• | | • | | | • | • | • |
| Fixapret [®] NEC Plus liq c | DMDHEU, modified | 000 | 0000 | <75 ppm | ••• | •• | • | | | • | • | • |
| Fixapret [®] AP liq c/ F-AP liq | DMDHEU, modified suitable for low temperature curing | 000 | 0 | <75 ppm | ••• | | • | | | • | • | • |
| Fixapret [®] PC liq | DMDHEU, modified pre-catalyzed, methanol-free | 00 | 000 | <75 ppm | | | | | | • | • | • |
| Fixapret [®] ELF liq c | DMDHEU, modified, very well suitable for low temerature curing ultra-low formaldehyde | 00 | 0 | <50 ppm | | | | | | • | • | • |

 \star_2 If washed after curing in the recommended way

| PRODUCT | USE |
|------------------|--|
| RESIN CATALYSTS | |
| Catalyst NKB liq | DMDHEU-type |
| Catalyst NKC liq | DMDHEU-type (also suitable for melamines) |
| Catalyst NKS liq | DMDHEU-type (also recommended with Arkofix® NZW) |
| Catalyst FF liq | for all Arkofix [®] products |
| Catalyst F-M liq | DMDHEU-type |
| Catalyst MC1 liq | Catalyst for Moist Cure |
| Catalyst MC liq | Catalyst for Moist Cure |

- > Spotlight on HOTEL GRADE, a formaldehyde-free* system that redefines easy care for bed linen and fabrics, with wrinkle control, hygiene, and long lasting; that protects you and the environment

> Spotlight on CRISP & FRESH, a biocide-free and formaldehyde-free* system that redefines easy care for bed sheets, with wrinkle control and durable freshness, whilst protect you and the environment



LEGEND

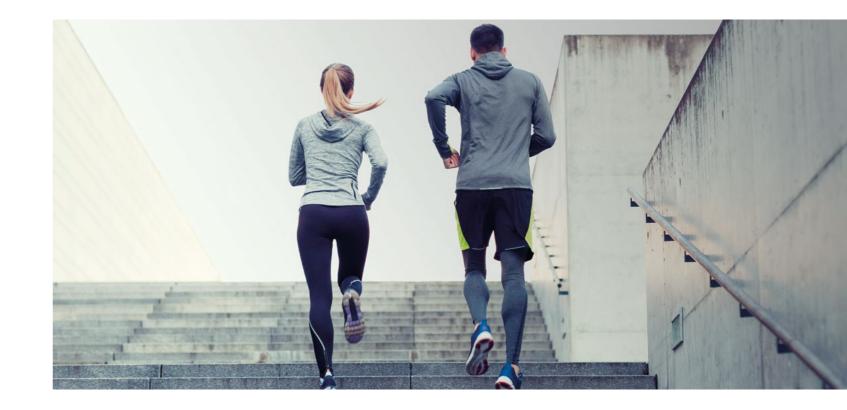
| 0000 | Very high | • | Suitable |
|------|-----------|----|--|
| 000 | High | | Recommended |
| 0 | Medium | | Highly recommended |
|) | Low | *3 | If used in the Moist Cure process chlorine resistance becomes poorer |

*Below limits of detection according to industry standard test methods

MOISTURE MANAGEMENT AND ANTIMICROBIAL PROTECTION: HYDROPERM[®] AND SANITIZED^{®1}

No matter what they are doing, consumers expect their clothes to feel comfortable at all times. Archroma's Hydroperm[®]-based moisture management system supplies wash-resistant hydrophilic properties for fibers of all kinds. Fabrics dry quicker, wick moisture away from the skin and stay soft and breathable even when the wearer is involved in high-intensity sport activities.

These benefits can be combined with the Sanitized® hygiene function for enhanced freshness. The Sanitized® Odor Control Function reduces the deposit of odor components thereby making garments more comfortable to wear. Depending on the chosen Sanitized® product we can effectively reduce and prevent the multiplication of bacteria, mold and mildew, algae and dust mites - the cause of undesirable odors, staining and material fatigue.



| | PRODUCT PROPERTIES | | | | | APPLIC | CATION | | | FIBER | TYPE | | |
|---|--|----------|-------|-------------|------------|--------|---------|---------|-----|------------|------|-----|------|
| PRODUCT | Brief description | Ionicity | White | Hydrophilic | Permanence | Pad | Coating | Exhaust | Jet | Cellulosic | PES | PA | loom |
| SMELL ADSORBENT FIN | NISHES / ANTI-ADHERANCE | | | | | | | | | | | | |
| OA10 | Smell adsorbent, anti-adherance, Non-biocidal | Ν | | 000 | 000 | | •• | • | | •• | | | |
| ANTIMICROBIAL FINIS | HES/ANTI-DUST MITE/ANTI-MOSQUITO | | | | | | | | | | | | |
| Sanitized ^{*,} T 99-19/ T 20-19 | Durable antimicrobial finish for textiles made of cellulosic fibres | С | •• | | 000 | | | | | ••• | • | • | • |
| Sanitized [®] T 27-22 Silver | Silver based antimicrobial product for multiple applications | N/(A) | | 00 | 000 | | | | | | | | |
| Sanitized [®] T 11-15 | Silver based antimicrobial product for multiple applications | (A) | | 00 | 000 | | | | | | | | |
| Sanitized [®] TH 14-14 | – Hygienic finish for textiles, antibacterial and mildew resistant | С | | 00 | 0 | | | | | | | | • |
| Sanitized [®] TH 15-14 | – Hygienic finish for textiles, antibacterial and mildew resistant | С | | 00 | 0 | | ••• | | | | | ••• | |
| Sanitized [®] TH 22-27 | – Hygienic finish for textiles, antibacterial and mildew resistant | (A) | • | 00 | 000*4 | | | | | • | | | |
| Sanitized [®] TH 26-11 | Hygienic finish for technical textiles, antibacterial, mildew- and rot-proof | N | | 00 | 0 | | ••• | • | | | | ••• | |
| Sanitized [®] TH 27-24 | – Hygienic finish for textiles, antibacterial and mildew resistant | A | • | 00 | 000*4 | | ••• | | | • | | ••• | |
| Sanitized [®] AM 23-24 | Mosquito and dustmite protection, wash- permanent when suitable binder is added | N | | 00 | 000 | | | | | | • | • | • |
| Sanitized [®] TPL 27-42 | Antimicrobial protection for solvent PUR coating | N | • | 0 | 00 | | | | | • | | | |
| ANTIMICROBIAL FINIS | HES BASED ON NATURAL ANTIMICROBIAL AGENTS | ; | | | | | | | | | | | _ |
| Sanitized [®] Mintactiv 50 | Durable antimicrobial finish for textiles made of cellulosic fibres | (C) | | - | 000 | | | | | | • | • | |

| | PRODUCT PROPERTIES | | | | | APPLI | CATION | | | FIBER | ТҮРЕ | | |
|---|--|----------|-------|-------------|------------|-------|---------|---------|-----|------------|------|-----|------|
| PRODUCT | Brief description | lonicity | White | Hydrophilic | Permanence | Pad | Coating | Exhaust | Jet | Cellulosic | PES | PA | Wool |
| MOISTURE MANAGEMEN | т | | | | | | | | | | | | |
| Hydroperm [*] HV liq | Hydrophilizing silicone, microemulsion | Ν | ••• | 000 | 0 | ••• | •• | | | •• | | ••• | • |
| Hydroperm [®] RPU New liq c | Thermoreactive polyurethane, for permanent hydrophilic finish of sportswear | N | | 000 | 000 | | | | | | | | ••• |
| Hydroperm [®] SRHA liq | Product for soil release and moisture management finishes with antistatic properties | N | | 000 | 000 | | | | | | | | •• |
| Hydroperm [®] APA liq | Polyamide derivate, for durable hydrophilic finish | Ν | ••• | 000 | 000 | ••• | | ••• | | •• | •• | ••• | •• |
| Hydroperm [®] T liq | Product for soil release and moisture management finishes with antistatic properties | N | | 000 | 000 | | | | | | | | •• |

- > Spotlight on ODOR CONTROL 2.0, a system for odor-free sportswear where permastink cannot build up on your favorite clothes, that's applicable on polyester, cotton and nylon
- > Spotlight on <u>HYDRY 2.0</u>, a complete system for your exercise regime that keeps you and your gear dry and fresh for longer

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

| LEGEN | D |
|-------|-------------------------------------|
| 000 | Excellent |
| 00 | Good |
| 0 | Reasonable |
| • | Suitable |
| •• | Recommended |
| ••• | Highly recomended |
| С | Cationic |
| (C) | Weakly cationic |
| N | Non-ionic |
| A | Anionic |
| (A) | Weakly anionic |
| *4 | If applied by exhaust on PES and PA |

OUTSTANDING SOFTNESS: SOLUSOFT®, CERALUBE®, SILIGEN® AND OTHERS

Garments are known as tactile fabrics because they are pleasant to feel and touch. They give us a sense of well-being and protection. At the final stage of textile processing – finishing – we give the garment the "extra handle" or "magic softness touch". Archroma manufactures a wide range of permanent and non-permanent softeners for every need.

10 per

These softeners not only make your garments feel good but also include other value-added benefits such as good sewability, hydrophilicity and significantly lower chances of tearing as well as the various improvements listed in the product table.

> Spotlight on EARTH SOFT, a complete system for your exercise regime that keeps you and your gear dry and fresh for longer.

| | PRODUCT PROPERTIES | | | | | APPLIC | CATION | | FIBER | TYPE | | |
|---|--|----------|-------|-------------|------------|--------|---------|-----|------------|------|-----|------|
| PRODUCT | Brief description | lonicity | White | Hydrophilic | Antistatic | Pad | Exhaust | Jet | Cellulosic | PES | PA | Wool |
| SILICONE SOFTENERS – H | YDROPHILIC | | | | | | | | | | | |
| Siligen [®] EH1 liq | Super-soft, hydrophilic silicone, jet stable, for all hydrophilic finishes, it is partly based on biomass products | Ν | ••• | 000 | | ••• | | •• | ••• | | ••• | |
| Siligen [®] SHC New liq hc | High concentrated hydrophilic silicone for finishing terrycloth goods and bath towels | Ν | | 000 | | | | | ••• | | | |
| Siligen [®] MIH liq | Economical hydrophilic silicone for finishing terrycloth goods, bath towels, etc. | (C) | | 000 | | | | • | | | | |
| Siligen [®] SIH liq | Super-soft, hydrophilic silicone, jet stable, for all hydrophilic finishes | N | | 000 | | | | | ••• | | | |
| Siligen [®] SIH-S New liq | – Super-soft, hydrophilic macro-emulsion silicone, jet stable, for all hydrophilic finishes | N | ••• | 000 | | | | • | | | | |
| SILICONE SOFTENERS | | | | | | | | | | | | |
| Solusoft [®] ACN liq | Amino-modified silicone elastomer, macroemulsion, "Cashmere"-handle | (C) | • | | | | • | | ••• | | | |
| Solusoft [®] FE liq | Modified silicone elastomer, macro- emulsion, best softener for pigment prints | Ν | | | | | | | ••• | | | |
| Solusoft [®] NMW liq c Solusoft [®] MW liq c | Silicone elastomer, microemulsion, stable in a wide pH-range | N | | | | | • | | | | | |
| Solusoft [®] NUP liq | – Modified silicone elastomer, macro-emulsion | N | | | | | | | | | | |
| Solusoft [®] SE1 oil liq | Silicone fluid for hydrophilic finishes | (C) | •• | 00 | | ••• | • | | ••• | •• | ••• | |
| Solusoft [®] WA liq | – Amino-modified silicone elastomer, semi-macroemulsion | С | • | | | | • | | ••• | | | |
| FATTY ACID SOFTENERS | | | | | | | | | | | | |
| Leomin [®] AFK gr hc | Granulates softener soluble in hot water | С | • | | | •• | ••• | | | •• | | •• |
| Cepreton [®] UH p | Granulates softener soluble in hot water | C | | | | | | | ••• | •• | | |
| Cepreton [*] UC New p | Granulates softener soluble in cold water | С | | | | •• | ••• | | ••• | | •• | |
| Cepreton [®] UN p | Granulates softener soluble in hot water | N | ••• | | | | | | ••• | | | |



| | PF | RODUCT PROPERTI | ES | | | | | | APPLI | CATION | | FIBER | TYPE | | |
|---|---|---|------------|---------------|----------|-------|-------------|------------|-------|---------|--------|------------|------|---------|------|
| PRODUCT | Br | rief description | | | Ionicity | White | Hydrophilic | Antistatic | Pad | Exhaust | Jet | Cellulosic | PES | PA | Wool |
| POLYETHYLENE SOFTEN | ERS/L | UBRICANTS – SEWA | | PROVERS | | | | | | | | | | | |
| Ceralube [®] ET liq | | wability improver | | | D | •• | | | ••• | ••• | • | ••• | •• | •• | •• |
| Ceralube [®] JW liq | be [*] JW liq Jet-stable sewability improver, suitable for white goods | | | | | | 00 | | | | ••• | | ••• | •••• | •• |
| Ceralube [®] OEW liq | | t-stable softener a prover for white a | | | (C) | | 0 | | | | | | •• | •• | •• |
| Ceralube [®] PHD liq c | im | oncentrated soften prover, additive fo lorocarbon finishe | or resin f | | N/D | ••• | | | ••• | | | | •• | •• | •• |
| Ceralube [®] SVN liq | | ermostable, non-s ry soft sewability i | | | N/D | | 0 | | | •• | | | ••• | ••• | •• |
| Ceralube [®] AKT New liq o | Ra | ising assistant wit | h antista | tic effect | (C) | •• | | 00 | ••• | • | | ••• | ••• | ••• | •• |
| Ceralube [®] PEP liq c | | oncentrated soften prover, additive fo | | , | N | | 00 | | | | | | •• | •• | •• |
| Ceralube [®] F-PEB liq | | onomical softener prover, additive fo | | | N | | 0 | | | | | | •• | •• | •• |
| YARN LUBRICANTS | | | | | | | | | | | | | | | |
| Ceralube [®] ET liq | Ya | rn finishing to low | er frictio | n coefficient | D | •• | | | | ••• | • | ••• | •• | •• | •• |
| POLYURETHANE SOFTEN | ERS | | | | | | | | | | | | | | |
| Hydroperm [®] RPU New liq c | | ermoreactive poly ermanent hydroph | | | N | | 000 | | | | | | | | |
| Perapret [®] PU New liq | | olyurethane disper Ilky handle, streng | | | А | | 0 | | | | | | • | •• | • |
| SOFTENER FOR FLUORO | CARBO | ON FINISHES | | | | | | | | | | | | | |
| Ceralube [®] PHD liq c | | oncentrated soften prover for fluoroc | | - | N/D | ••• | | | ••• | | - | | •• | | •• |
| LEGEND | | | | | | | | | | | | | | | |
| (C) Weakly cationic | А | Anionic | ١ | Non-ionic | | _ | | | •• | Recon | nmende | ed | 00 | Good | |
| C Cationic | D | Amphoteric | • | Suitable | 000 | Excel | lent | | | Highly | recom | ended | 0 | Reasona | able |

STATE-OF-THE-ART REPELLENCY AND SOIL RELEASE: SMARTREPEL® AND NUVA®

Archroma's Nuva® product line is based on a telomerization process to achieve modern stain management properties. Active protection refers to water, oil and alcohol repellency, and additionally includes chemical resistance, while passive protection refers to stain or soil release properties. During application, the fluorocarbon dispersion surrounds each fiber with an invisible protective film. This film is responsible for achieving the highest durability for clothing, for example, or excellent initial values for instance for disposable nonwoven. N series, consists of products based on C6 chemistry. The N in the product name stands for: novel chemistry, non-detectable PFOA (below limit of detection), notable improvement in repellence, and non-sensitive in regard to compatibility with finishing chemicals.

After several years of development, Archroma designed a completely new line of water repellent agents that are not based on fluorine: Smartrepel® Hydro. Their outstanding performance does not find an equivalent on the market bringing together two major benefits that were unattainable until now: a nature-friendlier chemistry, together with longlasting, efficient water repellency.



PES

... •••

•• ... •• ...

...

•••

.

.

••

| ION PRO | PERTIES | | | | | | APPLICA | TION FIE | LD | | | | | | |
|----------------|----------------------|------------|----------------------------|---------------------------------|------------------------------|--|---------------------|---------------|-----------------------|-----------------------------------|--------------------------------------|--------------------|---------------------------------|-----------|---------------------------------------|
| Oil repellency | Diesel repellency | Permanence | Oil based stain release | Water based stain repellence | Laundry air dry potential | Remarks | Classical finishing | Home textiles | Awnings/ sunshades | Work wear/ protective clothing | Nonwovens for automotive industry | Technical textiles | Preimpregnation for coatings | Cellulose | Blends of cellulose and svnthetics |
| | | | - | | | | | - | | | | | | | |
| | | 0000 | | 00 | 00 | Excellent wash durability on cotton | ••• | • | • | • | | | •• | ••• | ••• |
| | | | | | 0 | Excellent anti-wicking properties on synthetics | ••• | • | • | • | | | •• | •• | ••• |
| | | 0000 | | 00 | 000 | Excellent peel strength with PU coatings | | | | • | | ••• | | • | ••• |
| | | 0000 | | 0000 | 0 | Stain repellent on synthetics and cotton | | | • | • | | | • | •• | ••• |
| | | 000 | | 00 | 00000 | Very soft handle | | | | • | | | ••• | | |
| OA FREE | * | | | | | | | | | | | | | | |
| 00000 | 00000 | 00000 | | 0000 | 000 | PFOA free*, high performance | | ••• | • | ••• | •• | •• | | | ••• |
| 00000 | 00000 | 000 | | 00000 | 000 | PFOA free*, recommended for FR applications and fastness sensitive fabrics | | | | | | | | | |
| 0000 | 000 | 0000 | | 000 | 0 | PFOA free*, universal product with pleasant handle | ••• | ••• | | •• | ••• | ••• | | ••• | ••• |
| 00000 | 00000 | 000 | | 00000 | 000 | PFOA free*, high performance for technical textiles | •• | ••• | •• | •• | ••• | ••• | •• | •• | ••• |
| 00000 | 00000 | 000 | | 0000 | 00 | PFOA free*, recommended for high water column and fastness sensitive fabrics | | | | •• | | | | | |
| 0000 | 000 | 0000 | | 000 | 0 | PFOA free*, universal product with pleasant handle | | | | | | | | | |
| FOA FRE | EE* | | | | | | | | | | | | | | |
| 00000 | 00 | 0000 | 00000 | | | PFOA free*, soil release agent | | | | | | | | | ••• |

> Spotlight on RAIN AWAY, a durable water repellent system that protects your gear outdoors, whilst keeping you and the planet safe

•••

The range is constantly updated to fulfil environmental regulations. The new generation of fluorocarbons, the Nuva®

PRODUCT / APPLICATIO

| lonicity |
|---------------------------------|
| Water repellency |
| Oil repellency |
| Diesel repellency |
| Permanence |
| Oil based stain release |
| Water based stain repellence |
| Laundry air dry potential |
| F |

FLUORINE-FREE WATER REPELLENT

PRODUCT

| Smartrepel [®] Hydro CMD liq | (C) | 00000 | 0000 | 00 | 00 | Excellent wash durability on cotton |
|---------------------------------------|-----|-------|----------|----------|-------|---|
| Smartrepel [®] Hydro SPK liq | (C) | 00000 | | | 0 | Excellent anti-wicking properties on synthetics |
| Smartrepel [®] Hydro TS liq | (C) | 00000 | 0000 | 00 | 000 | Excellent peel strength with PU coatings |
| Smartrepel [®] Hydro SR liq | (C) | 00000 | 0000 | 0000 | 0 | Stain repellent on synthetics and cotton |
| Smartrepel® Hydro LDS liq | (C) | 00000 | 000 | 00 | 00000 | Very soft handle |

NUVA® N – REPELLENCY, C6 PRODUCT RANGE, PFOA

| Nuva [®] N 2114 liq | (C) | 00000 | 00000 | 00000 | 00000 | 0000 | 000 | PFOA free*, high performance |
|------------------------------|-----|-------|-------|-------|-------|-----------|-----|--|
| Nuva [°] N 2155 liq | N | 00000 | 00000 | 00000 | 000 | 00000 | 000 | PFOA free*, recommended for FR applications and fastness sensitive fabrics |
| Nuva [®] N 1811 liq | (C) | 00000 | 0000 | 000 | 0000 | 000 | 0 | PFOA free*, universal product with pleasant handle |
| Nuva [®] N 2116 liq | (C) | 00000 | 00000 | 00000 | 000 | 00000 | 000 | PFOA free*, high performance for technical textiles |
| Nuva [®] N 2159 liq | N | 00000 | 00000 | 00000 | 000 | 0000 | 00 | PFOA free*, recommended for high water column and fastness sensitive fabrics |
| Nuva [®] N 1802 liq | (C) | 00000 | 0000 | 000 | 0000 | 000 | 0 | PFOA free*, universal product with pleasant handle |

NUVA° N – SOIL RELEASE, C6 PRODUCT RANGE, PFO

| Nuva [®] N 4547 liq | (C) | 00 | 00000 | 00 | 0000 | 00000 | | PFOA free*, soil release agent | ••• | • |
|------------------------------|-----|----|-------|----|------|-------|-----|--|-----|---|
| Nuva [®] N 4118 liq | (C) | | 0 | | 0000 | 000 | 000 | PFOA free*, soil release agent with improved wicking abilities | ••• | |

Flash point for all products >100°C

| PA | Wool | Glass fiber |
|----|------|-------------|
| | | |
| • | •• | |
| • | | |
| • | • | |
| •• | • | |
| •• | • | |
| | | |
| • | | |
| •• | • | •• |
| • | • | |
| •• | • | |
| •• | • | •• |
| •• | • | |
| | | |
| | | |

••

•

| LEGEND | |
|--------|--|
| (C) | Weakly cationic |
| Ν | Non-ionic |
| 00000 | Very high |
| 0000 | High |
| 000 | Medium |
| 00 | Low |
| 0 | Very low |
| ••• | Especially recommended |
| •• | Recommended |
| • | Suitable |
| * | Below limit of detection according to industry standard test methods |

/ ENHANCED STRENGTH, FLEXIBILITY AND DURABILITY: APPRETAN®, LURAPRET® AND TEXAPRET®

Our dispersions have been known and valued by customers for many years, whether in coating, spraying, foaming, lamination or impregnation.

In meeting today's ecological challenges, our products are water-based and solvent-free, covering a variety of base polymers and different effects. Ranging from soft to hard, from elastic to rigid, from hydrophilic to hydrophobic, impermeable to breathable, they allow tailormade solutions for customerspecific requirements. The Appretan® E polymer series is our range of ultra-low formaldehyde polymer dispersions. Together with our Appretan® FF and Appretan® FFX these polymers are for the production of textiles that are expected to comply with the limit values of formaldehyde as defined by many labels as e.g. Oeko-Tex Standard 100.

Appretan[®] E and Appretan[®] FFX are self-crosslinking polymers to achieve a high level of performance in technical applications. Appretan[®] NTR partially bio-based polymers, a break-through coating binder range based on renewable natural ingredients for applications such as tea bags, coffee filters or capsules.



| | TECHNI | CAL DATA | | | | | | | APPLIC | CATION | FIELDS | 5 | | | | | | | | | | | | | | | | | | | |
|--|--------------------|--|------------|-------------------|----------|-------------------|--------------|---|-------------------|-----------------------|---------|----------------------|--------------------|---------------|----------------|-------------------|--------------------------|--------------------------------|--|------------------|--------------------------|--------------------------------------|---|------------------------------|--------------------|----------|---------|-------|---------|---------------------------------|------------------------|
| PRODUCT | Solid content in % | TG in °C (glass transition temperature) | pH value | Viscosity in mPas | lonicity | Self-crosslinking | Polymer base | Remarks | Nonwoven waddings | Nonwoven interlinings | Filters | Carriers for bitumen | Technical nonwoven | Woven carpets | Tufted carpets | Needle punch/felt | Stiffening/filling agent | Upholstery, matress ticking | Glass cloth/ wall covering, buildings | Awnings, linings | Roller-, vertical blinds | Tents, table, protective clothing | Lamination, self adhesive heat sealing | Molding shapes automotive | Technical textiles | Flocking | Fashion | Wipes | Hygiene | Wash&Dry cleaning resistance | Electrolytes stability |
| | | · | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| FORMALDEHYDE FREE PA | | | | | | | E COPOL | | | | | | | | | | | | | | | | | | | | | | | | |
| Appretan [®] NTR 6304 liq Appretan [®] NTR 6553 liq | | -10 +15 | 3.5 3.0 | | | no | | Biocide free | | • | • | | • | | • | • | • | • | | | | | | | • | | • | • | • | | • |
| | 40 | +15 | 5.0 | 00 | A | no | | Biocide free | | | • | • | • | | | • | • | | | | | | | • | • | | • | | • | | • |
| FORMALDEHYDE FREE* AC | RYLATE CO | POLYMERS | ; | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appretan [®] FF 2100 liq | 60 | -30 | 5.0 | | Α | no | AC | Selfadhesive | | | | | | | • | • | | | • | | | | • | | | | | | | | |
| Appretan [®] FFX 6270 liq | 50 | -13 | 7.0 | 0 | Α | yes | ST/AC | | | • | • | | • | | | • | | • | • | | | | | • | | | | | | • | |
| Appretan [®] FF 6400 liq | 50 | 0 | 7.0 | 0 | Α | no | ST/AC | | | • | | | | • | • | • | | • | | | | | • | | | • | | | | | |
| Appretan [®] FF 6500 liq | 50 | +10 | 8.0 | 0 | Α | no | ST/AC | | | • | | | • | | | | • | | • | | • | | | | | | | | | | |
| Appretan [®] FF 6620 liq | 50 | +22 | 8.0 | 0 | A | no | ST/AC | High heat sealing properties | | | • | | • | | | • | | | | | • | | • | | | | | | | | |
| Appretan [®] FFX 6730 liq | 50 | +33 | 8.5 | 0 | A | yes | ST/AC | High adhesion, high abrasion resistance | | • | • | • | • | | | | | | • | | | • | | | • | | | | | • | |
| Appretan [®] FFX 2730 liq | 50 | +33 | 8.5 | 0 | A | yes | AC | Low HHV, high adhesion | | • | • | • | • | | | | | | • | | | • | | | • | | | | | • | |
| Appretan [®] FF 2110 liq | 40 | +70 | 7.5 | 0 | A | no | AC | stable film without crosslinker | | • | | | | | | | | • | | • | | | • | | • | | | | | | |
| ULTRA LOW FORMALDEH | YDE ACRYL | АТЕ СОРО | LYMERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appretan [®] E 6200 liq | 50 | -20 | 4.5 | 0 | А | yes | ST/AC | | | • | | | • | | | • | • | • | • | • | • | • | | | | • | • | | | • | |
| Appretan [®] E 4250 liq | 50 | -15 | 4.0 | 0 | Α | yes | VA/AC | | | • | • | _ | • | | | | • | • | | | | | | | | | • | • | | • | |
| Appretan [®] E 6400 liq | 50 | 0 | 5.0 | 0 | A | yes | ST/AC | | | • | • | | • | | | • | • | • | • | | | | | | | | • | | | | |
| Appretan [®] E 6441 liq | 50 | +7 | 4.0 | 0 | Α | yes | ST/AC | | | • | • | | • | | | • | • | • | | • | | | | | • | | | | | • | |
| Appretan [®] E 6541 liq | 50 | +17 | 7.0 | 0 | Α | yes | ST/AC | | | • | • | | • | | • | • | • | | | | | | | | | | | • | | • | |
| Appretan [®] E 6680 liq | 50 | +28 | 4.0 | 0 | A | yes | ST/AC | | | • | • | • | • | | | • | • | | • | • | • | • | | • | | | • | | | • | |
| Appretan [®] E 6870 liq | 50 | +47 | 3.0 | 0 | Α | yes | ST/AC | | | | • | | • | | | | • | | | | _ | | | | • | _ | • | | | • | |

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

| LEGEND | |
|--------|--|
| VA | Vinyl Acetate |
| AC | Acrylate |
| ST | Styrene |
| PU | Polyurethane |
| HHV | Higher heating value |
| DMDHEU | Dimethoxydihydroxyethylenurea |
| HFFR | Halogen free flame retardant |
| TEA | Triethanolamine |
| PES-PU | Polyester Polyurethane |
| PE-PU | Polyether Polyurethane |
| PC-PU | Polycarbonate Polyurethane |
| A | Anionic |
| N | Non-ionic |
| 0000 | High viscosity (>10'000 mPas) |
| 000 | Viscous (2'000-10'000 mPas) |
| 00 | Medium – low viscosity (300-2'000 mPas) |
| > | Low viscosity (<300 mPas) |
| • | Suitable |
| * | Below limit of detection according to industry standard test methods |

| | TECHNI | CAL DATA | | | | | | | APPLI | CATION | FIELDS | 5 | | | | | | | | | | | | | | | | | | | | |
|--------------------------------------|--------------------|--|----------|-------------------|----------|-------------------|--------------|--|-------------------|-----------------------|---------|----------------------|--------------------|---------------|----------------|-------------------|--------------------------|--------------------------------|--|------------------|--------------------------|--------------------------------------|---|------------------------------|--------------------|----------|---------|-------|---------|---------------------------------|------------------------|----------------|
| PRODUCT | Solid content in % | TG in °C (glass transition temperature) | pH value | Viscosity in mPas | lonicity | Self-crosslinking | Polymer base | Remarks | Nonwoven waddings | Nonwoven interlinings | Filters | Carriers for bitumen | Technical nonwoven | Woven carpets | Tufted carpets | Needle punch/felt | Stiffening/filling agent | Upholstery, matress ticking | Glass cloth/ wall covering, buildings | Awnings, linings | Roller-, vertical blinds | Tents, table, protective clothing | Lamination, self adhesive heat sealing | Molding shapes automotive | Technical textiles | Flocking | Fashion | Wipes | Hygiene | Wash&Dry cleaning resistance | Electrolytes stability | HF-Weldability |
| ACRYLATE COPOLYMERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appretan [®] N 92100 liq | 45 | -30 | 5.0 | 0 | А | yes | AC | High solvent resistance | | • | | | • | | | | • | | | | • | • | | | | • | • | | | | | |
| Appretan [®] N 96100 liq | 50 | -20 | 3.5 | | A | yes | ST/AC | | | • | | | • | | | | • | • | • | • | • | • | | | | | | | | • | | |
| Appretan [®] NI liq | 45 | -20 | 4.0 | 0 | N/A | yes | VA/AC | Compatibility to be pre-tested | | • | | | • | | | | • | | | | | | | | | | | | | • | | |
| Appretan [®] N 96101 liq | 50 | -17 | 3.0 | 0 | A | yes | ST/AC | - <u>- </u> | | • | • | | | | • | • | • | • | • | • | • | • | | | | • | | | | • | | |
| Appretan [®] N 94101 liq | 50 | -15 | 4.0 | 0 | A | yes | VA/AC | | | • | | | • | | | • | • | • | | | | | | | | | | • | | • | | |
| Appretan [®] PL 10073 liq | 50 | -10 | 7.0 | 0 | A | yes | ST/AC | High wetting properties, low migration profile | | • | • | | • | | • | • | • | • | • | • | | • | | | | | | | | • | | |
| Appretan [®] N 92111 liq | 50 | -8 | 5.5 | | A | yes | AC | | | • | | | • | | | | • | | • | • | • | • | | | | | | | | • | | |
| Appretan [®] N 92121 liq | 50 | +10 | 6.0 | | A | yes | AC | | • | • | • | | | • | | | • | • | • | • | • | | | | | | | | | • | | |
| Appretan [®] DS 703 liq | 50 | +24 | 2.5 | 0 | A | yes | AC | | | • | | | | | | | | • | | • | • | | | | • | | | • | • | • | | |
| Appretan [®] N 92131 liq | 50 | +26 | 4.0 | 0 | A | yes | AC | | • | • | | | | | | | • | | • | • | • | • | | | | | | | | • | | |
| Appretan [®] N 94121 liq | 50 | +27 | 5.0 | 0 | Α | yes | VA/AC | | • | • | • | | | • | | • | • | • | • | • | • | | | | | | | • | | • | | |
| Appretan [®] N 96131 liq | 50 | +28 | 4.0 | 0 | A | yes | ST/AC | | | • | | • | • | | • | • | • | | • | • | • | • | | • | | | | | | • | | |
| Appretan [®] N 96131 SB liq | 50 | +28 | 2.5 | 0 | Α | yes | ST/AC | High tensile strength at high temperature | | | • | • | • | | | | | | • | | | | | • | | | | | | • | | |
| Appretan [®] N 94151 liq | 50 | +38 | 4.0 | 0 | A | yes | VA/AC | nonwoven and carpet back coating | • | • | | | | • | | • | • | | | | | | | | | | | • | | • | | |
| Appretan [®] PL 10070 liq | 50 | +44 | 7.0 | 0 | A | yes | ST/AC | High wetting properties, low migration profile | | • | • | | • | • | | • | • | | • | | | | | • | | | | | | • | | |
| Appretan [®] N 92151 liq | 50 | +45 | 3.0 | 0 | Α | yes | AC | | • | • | • | | • | | | | • | • | | • | • | • | | | | | | | | • | | |
| Appretan [®] N 9616 liq | 50 | +47 | 4.0 | 0 | A | yes | ST/AC | | | • | • | • | • | | | • | • | | • | | • | | | • | | | | | | • | | |
| VINYLACETATE HOMOPOLY | MERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Appretan [®] MB Extra liq | 55 | +10 | 4.5 | 000 | Ν | no | VA | | | | • | | | | • | • | • | | • | | | | • | | | | | | | | | |
| Appretan [®] TTL liq | 50 | +33 | 4.5 | 00 | Ν | no | VA | Low viscosity | • | | • | | | • | • | • | • | | • | | | | | | | | | • | | | • | |
| Appretan [®] TS liq | 55 | +33 | 4.5 | 000 | N | no | VA | | • | | • | | | • | • | • | • | | • | | | | • | | | | | | | | | |
| Appretan [®] EM liq | 50 | +33 | 3.5 | 0000 | N | no | VA | | | | | | | • | | | • | | • | | | | • | | | | | | | | | |
| ACRYLONITRILE/ACRYLATE | COPOLV | MERS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| urapret [®] FF 8250 liq | 50 | -15 | 4.5 | 0 | A | no | AN/AC | Formaldehyde free, low tackiness | | • | • | | | | • | | | | | | | | | | • | • | • | • | | | | |
| Lurapret [®] DS 151 liq | 50 | -15 | 4.0 | | A | yes | | Low tackiness | | • | • | | • | | • | | | • | | | | | | | • | • | • | • | | • | | |
| Lurapret [®] D 579 liq | 50 | +7 | 5.0 | | A | yes | AN/AC | | <u> </u> | <u> </u> | | | | | | | | | | • | • | • | | | • | • | | | • | • | • | • |
| Lurapret [®] D 550 liq | 50 | +13 | 5.0 | | A | yes yes | AN/AC | | • | • | | | | | | | | • | | • | • | • | | | • | • | | | • | • | | |
| Lurapret [®] D 888 liq | 50 | +31 | 8.0 | 0 | A | yes | AN/AC | | • | • | | | | | | | | • | | | | | | | | | | | | | | |

- > Spotlight on FILTER IT CLEAN, a formaldehyde-free* and APEO-free* bonding system that makes non-wovens strong and safe, even when wet
- > Spotlight on <u>RAG N'ROLL</u>, a compostable binder system for nonwoven cleaning rags, that protect you and the planet
- > 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

| LEGEND | |
|--------|--|
| VA | Vinyl Acetate |
| AC | Acrylate |
| ST | Styrene |
| PU | Polyurethane |
| PES-PU | Polyester Polyurethane |
| PE-PU | Polyether Polyurethane |
| PC-PU | Polycarbonate Polyurethane |
| A | Anionic |
| N | Non-ionic |
| 0000 | High viscosity (>10'000 mPas) |
| 000 | Viscous (2'000-10'000 mPas) |
| 00 | Medium – low viscosity (300-2'000 mPas) |
| 0 | Low viscosity (<300 mPas) |
| • | Suitable |
| * | Below limit of detection according to industry standard test methods |

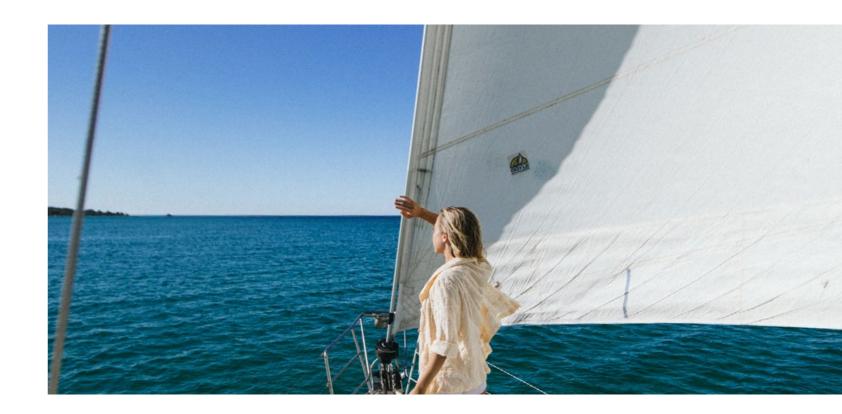
| | TECHNI | CAL DATA | | | | | | | APPLIC | CATION | FIELDS | | | | | | | | | | | | | | | | | | | | | |
|-----------------------------------|--------------------|--|----------|-------------------|----------|-------------------|--------------|--|-------------------|-----------------------|---------|----------------------|--------------------|---------------|----------------|-------------------|--------------------------|--------------------------------|--|------------------|--------------------------|--------------------------------------|---|------------------------------|--------------------|----------|---------|-------|---------|---------------------------------|------------------------|----------------|
| PRODUCT | Solid content in % | TG in °C (glass transition temperature) | pH value | Viscosity in mPas | lonicity | Self-crosslinking | Polymer base | Remarks | Nonwoven waddings | Nonwoven interlinings | Filters | Carriers for bitumen | Technical nonwoven | Woven carpets | Tufted carpets | Needle punch/felt | Stiffaning/filling agent | Upholstery, matress ticking | Glass cloth/ wall covering, buildings | Awnings, linings | Roller-, vertical blinds | Tents, table, protective clothing | Lamination, self adhesive heat sealing | Molding shapes automotive | Technical textiles | Flocking | Fashion | Wipes | Hygiene | Wash&Dry cleaning resistance | Electrolytes stability | HF-Weldability |
| POLYURETHANES | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Lurapret [®] N 5112 liq | 35 | n.a. | 8.0 | 0 | А | no | PE-PU | Soft, high water column | | | • | | | | | | • | | • | | | • | | | | | | | | • | | |
| Lurapret [®] N 5127 liq | 40 | n.a. | 8.0 | 0 | A | no | PES-PU | Medium hard, good abrasion resistance | | | | | | | | • | • | | | | | • | • | | | | | | | • | | |
| Lurapret [®] N 5392 liq | 60 | n.a. | 8.0 | 0 | A | no | PC-PU | Soft, very good UV resistance, TEA free | | • | | | • | | | | | | • | • | • | • | • | • | • | | | | | • | | |
| Lurapret [®] N 5396 liq | 35 | n.a. | 8.0 | 0 | A | no | PC-PU | Abrasion resistant, TEA free | | | • | | • | | | | • | | • | • | | | | • | • | | | | | • | | |
| Lurapret [®] N 5357 liq | 32 | n.a. | 8.0 | 0 | A | no | PES-PU | Breathable coating | | | | | | | | | | | | | | • | | | • | | • | | | • | | |
| Lurapret [®] N 5657 liq | 41 | n.a. | 5.5 | 0 | N | no | PES-PU | Acid stable, breathable coating | | | | | | | | | | | | | | • | | • | • | | • | | | • | | |
| Lurapret [®] N-DPS liq | 40 | n.a. | 8.0 | 0 | A | no | PES-PU | High temperature resistance | | • | | | • | | | | | • | | • | • | | • | | • | | • | • | | • | • | |
| Lurapret [®] N 6076 liq | 40 | n.a. | 8.0 | 0 | Α | no | PES-PU | Medium soft | | • | | | | | | | | • | | • | • | | • | | • | | | • | | • | • | |
| Lurapret [®] N 6072 liq | 37 | n.a. | 7.5 | 0 | Α | no | PE-PU | Hard, tough elastic | | • | | | | | | | | • | | • | • | | • | | • | | | • | | • | • | |
| READY-TO-USE FORMUL | ATIONS | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Texapret [®] BO-C liq | 58 | n.a. | 8.0 | 0 | А | yes | AC/AN | Ready to use blackout compound | | | | | | | | | | | • | | • | | | | • | | | | | | | |
| Texapret [®] C 6050 liq | 50 | -20 | 9.0 | 0 | A | no | ST/AC | Digital printing | | | | | • | | | | | | • | | | | | • | • | | | | | | | |
| Texapret [®] CF 8011 liq | 50 | -40 | 5.0 | 000 | A | yes | AC/AN | HFFR compound for automotive seat cover | | | | | | | | | | • | | | | | | • | | | | | | • | | |
| Texapret [®] D-AK liq | 45 | | 8.0 | 0 | A | no | PES/PU | Low softening point, for yarn coating | | | | | | | | | | | • | | | | | | • | | | | | | | |

| PRODUCT | Chemistry | Rheological behavior | Ionicity | Comments |
|---|---|----------------------|----------|--|
| ACRYLIC THICKENERS | | | | |
| Appretan [®] Thickener 2710 li | q Fully neutralized inverse thickener | Short | A | Yellowish, viscous. Highly efficient with an excellent electrolyte stability. |
| Appretan [®] Thickener 3308 li | q Partially neutralized inverse thickener | Short | A | Yellowish, slightly viscous. Fairly efficient with a good electrolyte stability. |

| LEGEND | |
|--------|--|
| VA | Vinyl Acetate |
| AC | Acrylate |
| ST | Styrene |
| PU | Polyurethane |
| PES-PU | Polyester Polyurethane |
| PE-PU | Polyether Polyurethane |
| PC-PU | Polycarbonate Polyurethane |
| A | Anionic |
| N | Non-ionic |
| 0000 | High viscosity (>10'000 mPas) |
| 000 | Viscous (2'000-10'000 mPas) |
| 00 | Medium – low viscosity (300-2'000 mPas) |
| 0 | Low viscosity (<300 mPas) |
| • | Suitable |
| * | Below limit of detection according to industry standard test methods |

HIGH PERFORMANCE SHAPE STABILIZATION: CASSURIT[®]

In order to provide moldings, filters or sailcloth, durable resilience properties, the textile industry uses melamine-based crosslinkers. These resins give temperature-independent duroplastic effects resulting in water-insoluble, thermostable hardening, which provides dimensional stability for temperatures up to 180° F (100° C) and above. Our Cassurit® crosslinkers are able to maintain a glossy or mechanically modified surface and also improve durability in setting and molding of nonwoven, as well as stiffening of technical textiles. They are also employed as an additive to improve durability when used as a fixing agent for polymer dispersions, reactive flame retardants or in combination with fluorocarbons for permanent water and oil-repellent applications, as well as to improve water column properties.



| | AQUEOUS, ETH | IERIFIED MELAMIN | E CROSSLINKER | | | | | NONWOVEN BO | NDING | TEXTILE | INISHING | | | | | TEXTILE COA | ING |
|-------------------------------|--------------|------------------|-------------------------|--------------------------------|---------------|------------|------------|----------------------------------|--|----------------------------------|----------|---------------------------------|--|-----------|----------------|---|------------------|
| PRODUCT | Ionicity | pH value | Dry substance in (%) | Free formaldehyde in (%) | Film hardness | Reactivity | Stability | Mechanical and needle-punched | Insulating material for automotive | Fixing agent for fluorcarbons | | Glass cloth; building sector | Rubber tapes (fabrics); ribbon fabrics | Sailcloth | Tents, awnings | Acoustic parts, moldings for vehicles | Cable coverings, |
| HIGHLY ETHERIFIED | | | | | | | | | | | | | | | | | |
| Cassurit [®] LFC liq | Ν | 8.5 - 10.5 | 50 | <0,1 | 0 | low | high | | | • | | | | | | | |
| Cassurit [®] MFB liq | N | 8.5 - 10.5 | 50 | <0.3 | 0 | low | high | | | • | | | | | • | | |
| PARTLY ETHERIFIED | | | | | | | | | | | | | | | | | |
| Cassurit [®] HH liq | Ν | 9.0 - 10.0 | 72 | <0.5 | 000 | high | low-medium | • | • | | • | | • | • | • | | |
| Cassurit [®] STM liq | N | 9.5 - 10.5 | 75 | <0.5 | 000 | high | low-medium | • | • | | • | | • | • | | | |



CATALYSTS Catalyst CR liq UF & MF – type

Cable coverings, 50

| LEGENI | D |
|--------|-----------|
| Ν | Non-ionic |
| 0000 | Very hard |
| 000 | Hard |
| 00 | Medium |
| 0 | Soft |
| • | Suitable |

ECO-ADVANCED FLAME RETARDANCE: PEKOFLAM[®]

Nowadays textiles are often created from multiple raw materials with huge impact on their flammability properties. Plus, they are present in almost any environment we are exposed to – either during sleep, work or travel.

With processors and consumers expecting sustainable solutions these days, related chemistries also have to match significantly higher ecological requirements compared to conditions applicable just a few decades ago. Archroma responds to these needs with a range of products which comply with major eco-labels and restricted substances lists and restricts its core technologies to **halogen and antimony free chemistries.**

FINISHING SPECIALTIES AND COATING ADDITIVES: ARKOPHOB®, FLUOWET® AND OTHERS

Archroma is well known as a system supplier for the whole
textile chain, specializing in solutions that include application
technology as well as effect optimization with approved
systems rather than focusing on single products.For optimized technical solutions, Archroma has just the right
additives to make your life that much easier.

With a variety of additives, you can achieve specific effects such as antislipage, antistatic, protection against phenolic or thermic yellowing. Also possible are handle modifications as well as specific surface adaptations.

| | APPLICA PROPER | | | APPLICA | TION FI | ELD | | | FIBER T | YPE | | | | | |
|-------------------------------------|-------------------|----------------------------|---------|-----------------|------------|---------------------------------|----------------------------|--------|---------|---------|------|---------------------------|-----------|-----------------------------|------------------|
| PRODUCT | Non-durable | Semi-durable ^{*5} | Durable | Protective wear | Automotive | Home/ decorative textiles | Construction & building | Carpet | Cotton | Viscose | Wool | Blends with synthetics | Polyester | Other synthetics (PA/PP) | Oeko-Tex listing |
| LIQUID GRADES | | | | | | | | | | | | | | | |
| Pekoflam [®] HSD liq | | 0 | | | | • | • | • | •• | •• | • | • | | • | |
| Pekoflam [®] MSP liq | | 0 | | | | •• | | • | •• | • | • | • | | | yes |
| Pekoflam [®] OP liq | 0 | | | | • | • | | | •• | | • | • | | • | |
| Pekoflam [®] THA liq | 0 | | | | • | • | • | | | | • | •• | | | |
| Pekoflam [®] PES liq c new | | | 0 | | | •• | | • | | | | | | • | yes |
| Pekoflam [®] TC 950 liq | | (0) | | | •• | •• | | • | | | | | •• | • | yes |
| POWDER GRADES | | | | | | | | | | | | | | | |
| Pekoflam [®] STC p | | (o) | | | •• | | | | | | | | •• | | yes |
| Pekoflam [®] TC 203 p | | (0) | | | | • | • | • | • | | | • | | | |
| Pekoflam [®] TC 503 p | | (0) | | | | •• | • | | • | • | • | •• | • | • | yes |

Pekoflam[®] PES liq c new is currently not REACH registered for Europe

LEGEND

| *5 | Resistance to water soaking according to BS EN 1021 |
|-----|---|
| • | Suitable |
| •• | Recommended |
| (0) | Depending on binder system |
| | |

> Spotlight on <u>SAFE SEATS 2.0</u>, a modular surface treatment system for seating materials that protects you anytime

| | PRODUCT PROPERTIES | |
|------------------------------------|--|----------|
| PRODUCT | Brief description | Ionicity |
| SPECIAL CROSSLINKERS | | |
| Arkophob [®] DAN New liq | Formaldehyde-free crosslinking agent (polyfunctional isocyanate X-linker, blocked), requires thermal activation | N |
| Arkophob [®] XLR liq | Polyfunctional isocyanate X-linker, unblocked (in aqueous medium the product has only limited shelf life) | N |
| HYDROPHOBIC AGENTS FO | DR TECHNICAL TEXTILES | |
| Arkophob [®] NPK liq | Non-durable water-repellent agent | С |
| Arkophob® EX liq | Paraffine wax based non-durable water-repellent agent | C |
| WETTING AGENTS | | |
| Kieralon [®] MRN liq c | Efficient wetting agent with non-rewetting properties, highly concentrated | N |
| Imerol° JET-B liq c | Mixture of nonionic surfactants, low foaming wetting agent and system stabilizer | N |
| Fluowet [®] UD liq | Wetting agent for fluorocarbons with non-rewetting properties | N |
| FOAMING AGENTS | | |
| Kieralon [®] SAS 30 liq | Economic foaming and wetting agent, hydrophilic | А |
| Afilan [®] AS-OS1 liq | Efficient foaming and wetting agent | Α |
| ANTI-FOAMING AGENTS | | |
| Antimussol [®] UDF liq | Economical and efficient defoamer, mineral oil free | Ν |
| SYSTEM STABILIZER | | |
| Fluowet [*] STAB new liq | Reduces roller deposition problems in pad applications of fluorocarbons | С |
| Luprintol Emulsifier PE New lig | Emulsifier and stabilizer to enhance stability and running properties of coating pastes | N |

| LEGEND | |
|--------|--|
| (C) | Weakly cationic |
| С | Cationic |
| N | Non-ionic |
| A | Anionic |
| D | Amphoteric |
| * | Below limit of detection according to industry standard test methods |

FINISHING SPECIALTIES AND COATING ADDITIVES: DICOFIX®, ELFUGIN® AND OTHERS

| | PRODUCT PROPERTIES | | | | | APPLI | CATION | | FIBER | ТҮРЕ | | |
|-------------------------------|--|----------|-------|-------------|------------|-------|---------|-----|------------|------|-----|------|
| PRODUCT | Brief description | lonicity | White | Hydrophilic | Antistatic | Pad | Exhaust | Jet | Cellulosic | PES | PA | Wool |
| ANTI SLIP AGENTS | | | | | | | | | | | | |
| Dicofix [®] SW liq c | Silicid acid dispersion, with low influence on handle | (C) | • | 0 | | ••• | | | ••• | ••• | ••• | • |
| ANTISTATIC AGENT | s | | | | | | | | | | | |
| Elfugin [®] AKT liq | Antistatic agent for synthetic fibers with anticorrosive effect | A | | 00 | 000 | | | | •• | | | •• |
| ANTI MIGRATION A | GENTS | | | | | | | | | | | |
| Perapret [®] FA liq | Anti migration agent, special additive in Color Fast Finish | Ν | | 00 | | | | | | | | •• |
| PHENOLIC YELLOW | ING PROTECTION | | | | | | | | | | | |
| Umidol [®] APY liq | Product to avoid phenolic yellowing | Ν | ••• | | | | | • | | | | • |
| Umidol [®] NYX liq | Economical product to prevent phenolic yellowing | A | ••• | | | ••• | •• | • | •• | •• | ••• | • |
| THERMIC YELLOWI | NG PROTECTION | | | | | | | | | | | |
| Umidol [®] UW pwd | Specialty products to avoid thermic yellowing in pre- heatsetting, post-heatsetting and molding processes | Ν | | | | | | | • | • | | • |

| LEGEN | D | | |
|-------|-------------------|-----|-----------------|
| 000 | Excellent | С | Cationic |
| 00 | Good | (C) | Weakly cationic |
|) | Reasonable | Ν | Non-ionic |
| | Suitable | А | Anionic |
| • | Recommended | (A) | Weakly anionic |
| •• | Highly recomended | | |

Check our latest updates at www.sportswear.archroma.com

www.automotive.archroma.com

...and our SYSTEMS SOLUTIONS for functional finishes

www.exteriortextiles.archroma.com

FUNCTIONAL FINISHES SOLUTIONS

Archroma is a key player for high quality applications, requiring state-of-the-art special effects while ensuring safety and efficiency standards are maintained.

Nordic walking, running, and the wide range of new activities bring a renewed desire for sport clothes that are finished with highly functional products to support our active lives. Body climate control, breathable fabrics, moisture transport, soil and water repellent effects and

color fastness are just a few buzz-words consumers are using when looking at sports garments, combined with convenience, design trends and durability.

Archroma's wide portfolio of finishing products ranges from world-class sewability improvers, wider range of softening and full range of functionality systems for water-repellency and anti-microbial. All in one to help to create value in any end market.

Strength and flexibility

abrasion resistance

Water-based solvent-free polymers,

including polymers with low or

zero formaldehyde content for

dimensional stabilization and

Protection

- Fluorine free water repellent Smartrepel[®] Hydro
- Repellency & soil release Nuva® N
- Water-based solvent-free polymers, including polymers with low or zero formaldehyde content for functional coating **Appretan**[®] Lurapret® **Texapret**[®]
- Flame retardant **Pekoflam**[®]
- Yellowing protection **Umidol**®
- Ready-to-apply FR coating compound solutions Texapret[®] CF
- Antiviral Sanitized[®]
- Antistatic Elfugin[®] AKT liq

Odor management

- Antimicrobial hygiene function Sanitized®
- Odor neutralization Sanitized[®] Odorex (OA10, OX20)

Softening

- Silicone softener Solusoft[®]
- Hydrophilic silicone softener Siligen®
- Fatty acid softener Leomin® **Cepreton**® **Ceranine**®
- Polyethylene softeners/ lubricants **Ceralube**[®]
- Yarn lubricants Ceralube[®] ET lig
- Polyurethane softeners Hydroperm[®] RPU New liq c Perapret[®] PU New liq
- Softener for fluorocarbon finishes Ceralube[®] PHD lig c
- **Moisture management** & thermocontrol
- Moisture management Hydroperm[®]
- Cooling effects coldblack[®]

- Appretan[®] Lurapret® **Texapret**[®]
 - Crease and shrink resistance **Arkofix**® **Fixapret**® Catalyst
 - Shape stabilization **Cassurit**®

Finishing specialties & coating additives

- Special crosslinkers **Arkophob**[®]
- Wetting agents Kieralon[®] MRN lig c Fluowet[®] UD lig Imerol[®] JET-B lig c
- Foaming agents Kieralon[®] SAS 30 liq Afilan®
- Anti-foaming Antimussol[®] UDF lig
- Svstem stabilizer **Fluowet**®
- Antislip Dicofix[®] SW liq c

THE ARCHROMA WAY TO A SUSTAINABLE WORLD

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

Safe – It's our nature to protect.

A solid core:

Our deeply rooted goal to protect people and our planet. Safe to use, safe to release and also safe to wear.

Efficient – It's our nature to rethink sustainable manufacturing.

Innovating application processes that minimize resources and maximize productivity, both in our and our customers' manufacturing as well as by setting ourselves ambitious sustainability goals.

Enhanced – It's our nature to add another level of value.

Innovation is critical. With it, we create additional effects, functionalities and aesthetics and sustainable differentiation to bring additional value, helping consumers to achieve their goals, for a life enhanced.



Ask your Archroma representative for additional information on our solution systems







www.archroma.com bptmarketing@archroma.com

COMPETENCE CENTER FINISHING & REPELLENTS Neuhofstrasse 11

4153 Reinach Switzerland

BRAND & PERFORMANCE TEXTILE SPECIALTIES

Archroma Singapore, Pte. Ltd. 1 International Business Park #06-01 The Synergy 609917 Singapore

This information corresponds to the present state of our knowledge and is intended as a general description of our products and their possible applications. Archroma makes no warranties, express or implied, as to the information's accuracy, adequacy, sufficiency or freedom from defect and assumes no liability in connection with any use of this information. Any user of this product is responsible for determining the suitability of Archroma's products for its particular application. *Nothing included in this information waives any of Archroma's General Terms and Conditions of Sale, which control unless it agrees otherwise in writing. Any existing intellectual/industrial property rights must be observed. Due to possible changes in our products and applicable national and international regulations and laws, the status of our products could change. Material Safety Data Sheets providing safety precautions, that should be observed when handling or storing Archroma products, are available upon request and are provided in compliance with applicable law. You should obtain and review the applicable Material Safety Data Sheet provided in compliance for a distinguist. For additional information, please contact Archroma.

*For sales to customers located within the United States and Canada the following applies in addition: NO EXPRESS OR IMPLIED WARRANTY IS MADE OF THE MERCHANTABILITY, SUITABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHERWISE OF ANY PRODUCT OR SERVICE.

[®] Trademark of Archroma registered in many countries © 2022 Archroma **CERTIFIED TO** SE EN ISO 9001:2015 SN EN ISO 14001:2015 SN EN ISO 45001:2018