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## FUNCTIONAL FINISHES FOR PERFORMANCE TEXTILES

Innovative and  
tailor-made solutions



# / Planet Conscious+ :

Our vision of delivering a deeper commitment to innovation and partnership for the textile industry.

## CREATING SUSTAINABLE SOLUTIONS

**Archroma's purpose is to lead our industry towards a more sustainable future for our customers and markets.**

Archroma is a global, diversified provider of specialty chemicals serving the branded and performance textiles, packaging and paper, and coatings, adhesives and sealants markets.

From fiber to end article, Archroma plays a key role throughout the entire textile supply chain, with special chemicals for pretreatment, dyeing, printing and finishing of textiles. Our innovative textile solutions enhance the desirability, performance and durability of apparel and other textiles in applications as diverse as denim, fashion, home textiles, automotive and special technical textiles. Archroma has colors and effects to make your textiles and articles desirable, durable, and safe for you and the planet.





## OUTSTANDING FUNCTIONAL EFFECTS

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. 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.

## ONE WAY+

### Our Planet Conscious approach to environmental and economic sustainability

The textile industry constantly faces challenges like the growing demand for sustainable textiles, compliance with environmental regulations, water consumption issues, and waste management. These challenges can hinder the overall manufacturing process and ultimately lead to decreased quality of production and products. At Archroma Textile Effects, we believe that our solutions and processes can offer brands and mills improved operational excellence throughout their textile value chain and create differentiation for economic, technological and environmental sustainability.

- Bespoke model to help mills and brands achieve their sustainability targets
- Step-change in quality and performance and value-added end-products
- Compliance with relevant regulations, certifications and industry standards
- Holistic resource-efficient and technology-driven process for continuous improvement
- Powered by Super Systems+

**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 comply with major industry MRSL requirements such as:

bluesign® • GOTS • REACH • ZDHC • C2C

Archroma are proud members and/or partners with the following organizations





/ CREASE AND SHRINK RESISTANCE:  
ARKOFIX®, FIXAPRET®, KNITTEX® AND CATALYST®

Modern resin finishes make life easier for end-users. In response to growing market demand for easy-care and non-iron 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.

Reactant resins, formaldehyde-free													
Product	Brief description	Reactivity	Chlorine resistance	CH2O Japan Law 112	Pad-Dry-Cure	Foam application	Garment-Dip	Moist-Cure	Post-Cure	Cellulosic	PES	PA	Wool
ARKOFIX® NF LIQ	DMeDHEU, formaldehyde free	high	YES	n.d.	***	**	**		*	***	*	*	*
ARKOFIX® NZF NEW LIQ	DMeDHEU, formaldehyde free	high	YES	n.d.	***	**	**	*	*	***	*	*	*
ARKOFIX® NZK LIQ	DMeDHEU, pre-catalysed, formaldehyde free	high	YES	n.d.	***	**	**		*	***	*	*	*
ARKOFIX® NZW LIQ	DMeDHEU, formaldehyde free, best for white and high DP rates	high	YES	n.d.	***	**	**	*	*	***	*	*	*
KNITTEX® FFRC	DMeDHEU, pre-catalysed, formaldehyde free	high	YES	n.d.	***	**	**		*	***	*	*	*

Reactant resins, others													
Product	Brief description	Reactivity	Chlorine resistance	CH2O Japan Law 112	Pad-Dry-Cure	Foam application	Garment-Dip	Moist-Cure	Post-Cure	Cellulosic	PES	PA	Wool
FIXAPRET® AP LIQ C / FIXAPRET® F-AP LIQ	DMDHEU, modified, low formaldehyde	high	NO	<75 ppm	***		*		***	***	*	*	*
FIXAPRET® CM / AMC LIQ C	DMDHEU, modified	medium	YES / NO	<75 ppm*	*			***		***	*	*	*
FIXAPRET® ECL LIQ C	DMDHEU, modified	high	YES	<75 ppm	***	**	*		*	***	*	*	*
FIXAPRET® ECO LIQ C	DMDHEU, modified	high	moderate	<75 ppm	***	**	*		*	***	*	*	*
FIXAPRET® ELF LIQ C	DMDHEU, modified, ultra low formaldehyde	medium	NO	<50 ppm	***	***	***		***	***	*	*	*
FIXAPRET® F-AMC LIQ	DMDHEU, modified	medium	YES / NO	<75 ppm*	*			***		***	*	*	*
FIXAPRET® F-ECO LIQ	DMDHEU, modified	high	NO	<75 ppm	***	**	*		*	***	*	*	*
FIXAPRET® NEC PLUS LIQ C	DMDHEU, modified	high	YES	<75 ppm	***	**	*		*	***	*	*	*
FIXAPRET® PC LIQ	DMDHEU, modified, methanol free, pre-catalysed	medium	moderate	<75 ppm	***	**	*		*	***	*	*	*
KNITTEX® 7636	DMDHEU, modified, pre-catalysed	high	YES	<75 ppm	***	**	*		***	***	*	*	*
KNITTEX® FA CONC. / KNITTEX® FA-LF	DMDHEU, modified	medium	YES / NO	<75 ppm*	*			***		***	*	*	*
KNITTEX® FEL	DMDHEU, modified	high	YES	<75 ppm	***	**	*		***	***	*	*	*

\*) if washed after curing                      Yes/No: "Yes" if applied in Dry Cure, "No" if applied in Moist Cure



Resin Catalysts	
Product	Use / Chemical base
CATALYST FM LIQ	Catalyst based on magnesiumchloride - for DMDHEU-type resins
CATALYST NKC LIQ / KNITTEX® CATALYST MO LIQ	Catalyst for DMDHEU-type resins; based on magnesium chloride
CATALYST NKB LIQ	HotMag. Catalyst for DMDHEU-type resins
CATALYST NKS LIQ	HotMag. Catalyst for DMDHEU-type resins
CATALYST MC LIQ	Catalyst for Moist Cure
KNITTEX® CATALYST UMP / CATALYST MC1 LIQ	Catalyst for Moist Cure

**LEGEND**

(C)

Weakly cationic

+++++

Very High

C

Cationic

++++

High

N

Non-ionic

+++

Medium

A

Anionic

++

Low

D

Amphoteric

+

Very Low

\*\*\*

Highly recomended

\*\*

Recommended

\*

Suitable

n.d.

not detectable

ooo

Excellent

oo

Good

o

Reasonable



# MOISTURE MANAGEMENT: HYDROPERM® AND ULTRAPHIL®

# ANTIMICROBIAL PROTECTION AND ODOR MANAGEMENT: SANITIZED®

No matter what they are doing, consumers expect their clothes to feel comfortable at all times. Archroma’s Hydroperm®- and Ultraphil®-based moisture management systems supply 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 with active control of microbes and germs. 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.

The latest non-biocidal odor management technologies provide absorption barriers to bacteria, making it easier for bacteria to be washed. This results in a cleaner, odor-free garment that provides lasting comfort and hygiene with significantly reduced environmental impact due to reducing laundering frequency.

Smell adsorbent finishes / Non-biocidal Odor Control													
Product	Brief description	Ionicity	White	Hydrophil	Permanence	Pad	Coating	Exhaust	Jet	Cellulosic	PES	PA	Wool
OA® 10	Odor adsorbent. Non-biocidal. Hydrophilic. For pad application	N	***	ooo	ooo	***	**			**	**	***	**
OX® 20	Odor adsorbent. Non-biocidal. No impact on absorbency. For pad and exhaust	D	***	o	ooo	***	**	***	***	**	***	***	**

Antimicrobial finishes / Anti-Dust mite / Anti-Mosquito													
Product	Brief description	Ionicity	White	Hydrophil	Permanence	Pad	Coating	Exhaust	Jet	Cellulosic	PES	PA	Wool
SANITIZED® T11-15	Silverbased antimicrobial product for multiple applications; not sold in Europe	N/(A)	***	oo	ooo	***	***	***	**	**	**	***	
SANITIZED® T27-22 SILVER	Silverbased antimicrobial product for multiple applications	N/(A)	***	oo	ooo	***	**	**	**	***	***	***	
SANITIZED® T99-19/ T20-19	Durable antimicrobial finish for textiles made of cellulosic fibres	C	**		ooo	***		***	**	***	*	*	**
SANITIZED® TH 14-14	Hygienic finish antibacterial and mildew resistant, active dust mite protection	C	**	oo	o	***	***			***	***	***	**
SANITIZED® TH 15-14	Hygienic finish antibacterial and mildew resistant, BPR approved	C	*	oo	o	***	***			***	***	***	**
SANITIZED® TH 18-13	Hygienic finish antibacterial and mildew resistant, EPA registered	C	*	oo	o	***	***			***	***	***	**
SANITIZED® TH 26-11	Protective finish for technical textiles, mildew- and rot-proof	N	***	oo	o	***	***	*	*	***	***	***	***
SANITIZED® TH 27-24	Protective finish for technical textiles, antibacterial and mildew- and rot-proof	N/(A)	*	oo	oo	***	***			*	***	***	**
SANITIZED® AM 23-24	Mosquito and dust mite protection, wash-permanent with suitable binder, BPR approved	N	***	oo	ooo	***	**			***	*	*	**

Antimicrobial finishes based on natural antimicrobial agents													
Product	Brief description	Ionicity	White	Hydrophil	Permanence	Pad	Coating	Exhaust	Jet	Cellulosic	PES	PA	Wool
SANITIZED® MINTACTIV 50	Biobased antimicrobial finish for textiles made of cellulosic fibres	C	**		ooo	***		***	***	***	*	*	**



Moisture management													
Product	Brief description	Ionicity	White	Hydrophil	Permanence	Pad	Coating	Exhaust	Jet	Cellulosic	PES	PA	Wool
HYDROPERM® APA LIQ	Polyamide derivative	N	***	ooo	oo	***		***	**	**	**	***	***
HYDROPERM® HV LIQ	Hydrophilizing silicone, microemulsion	N	***	ooo	o	***	**			**		***	*
HYDROPERM® RPU NEW LIQ C	Thermoreactive polyurethane, for permanent hydrophilic finish of sportswear	N	***	ooo	oo	***				***		***	***
HYDROPERM® SRHA LIQ	Product for soil release and moisture management finishes with antistatic properties	N	***	ooo	ooo	***		***	***	**	***	**	**
HYDROPERM® T LIQ	Product for soil release and moisture management finishes	N	***	ooo	ooo	***		***	***	**	***	**	**
ULTRAPHIL® HSD	Product for soil release and moisture management finishes with antistatic properties and very soft handle (contains silicone)	N	***	ooo	ooo	***		*		*	***	*	**
ULTRAPHIL® TG	Product for soil release and moisture management finishes with antistatic properties	N	***	ooo	ooo	***		***	***	*	***	**	**
ULTRAPHIL® TG-01	Product for soil release and moisture management finishes with antistatic properties	N	***	ooo	ooo	***		***	***	*	***	**	**
ULTRATEX® FH-AD	Very hydrophilic silicone emulsion for soft handle finish and creating hydrophilicity	N	***	ooo		***				***	**	***	***

## LEGEND

(C) Weakly cationic      +++++ Very High  
C Cationic      +++++ High  
N Non-ionic      +++ Medium  
A Anionic      ++ Low  
D Amphoteric      + Very Low

\*\*\* Highly recommended  
\*\* Recommended  
\* Suitable  
n.d. not detectable

ooo Excellent  
oo Good  
o Reasonable

SOFTNESS AND LUBRICATION:  
SOLUSOFT®, ULTRATEX®, TURPEX®, CERALUBE®,  
SILIGEN®, SAPAMINE® AND CEPRETON® 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. 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.

Silicone softeners												
Product	Brief description	Ionicity	White	Hydrophil	Antistatic	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
DICRYLAN LF®	Nonionic hydroxy functional silicone macro emulsion, non yellowing, antifriction finish	N/D	***	o		***			***	***	***	***
MEGASOFT® CEC 01	Emulsion of functional polydimethyl siloxane and fatty acid amide, Surface-smooth, full hand.	N/C	**			***			***	***	***	***
SOLUSOFT® ACN LIQ	Amino-modified silicone elastomer, macroemulsion, "Cashmere"-handle	(C)	**			***	*		***	***	***	***
SOLUSOFT® FE LIQ	Modified silicone elastomer, macro-emulsion, best softener for pigment prints	N	***			***			***	***	***	***
SOLUSOFT® MW LIQ C	Silicone elastomer, microemulsion, stable in a wide pH-range	N	***	o		***	*		***	***	***	***
SOLUSOFT® NMW LIQ C	Silicone elastomer, microemulsion, stable in a wide pH-range	N	***			***	*		***	***	***	***
SOLUSOFT® NUP LIQ	Modified silicone elastomer, macro-emulsion, super-smooth handle, excellent sewability	N	***			***			***	***	***	***
SOLUSOFT® SE1 OIL LIQ	Silicone fluid for hydrophilic finishes	(C)	**	o(o)		***	*		***	**	***	***
ULTRATEX® FMI-AD	Silicone elastomer, microemulsion	(C)	**	o		***			***	***	***	***
ULTRATEX® FSA NEW	Blend of non yellowing silicone macro emulsion and polyethylene	N	***	o		***			***	***	***	***
ULTRATEX® SI	Modified silicone elastomer, macro-emulsion, super-smooth handle, excellent sewability	(C)	***			***			***	***	***	***
ULTRATEX® UM-AD	Modified silicone elastomer, macro-emulsion, super-smooth handle, excellent sewability	(C)	*			***			***	***	***	***

Hydrophilic Silicone softeners												
Product	Brief description	Ionicity	White	Hydrophil	Antistatic	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
SILIGEN® EH 1 LIQ	Polyether-modified polysiloxane, biobased macroemulsion, highly jetstable	N	***	ooo	*	***	***	***	***	**	***	***
SILIGEN® SHC NEW LIQ HC	High concentrated hydrophilic silicone oil for terry towel	N	***	ooo		***	***	**	***	**	***	***
SILIGEN® SIH LIQ	Polyether-modified polysiloxane, microemulsion, highly jetstable	N	***	ooo	**	***	***	***	***	**	***	***
SILIGEN® SIM LIQ	Polyether-modified polysiloxane, microemulsion, highly jeststable	N	***	ooo	**	***	***	***	***	**	***	***
ULTRATEX® FMW	Modified hydrophilic silicone micro emulsion, contains Hals structure, absolutely non-yellowing; molding	(C)	***	ooo		***	**		***	***	***	***
ULTRATEX® STS-D / STS-DR	Modified hydrophilic silicone micro emulsion, better handle than STS-U	(C)	***	oo		***	**	*	***	***	***	***
ULTRATEX® STS-U	Modified hydrophilic silicone micro emulsion with excellent handle, more hydrophilic than STS-D	(C)	***	ooo		***	**	*	***	***	***	***
ULTRATEX® UHS	Polyether-modified polysiloxane with excellent handle characteristics and excellent hydrophilicity	N/C	***	ooo		***	***	**	***	**	***	***

Polyethylene softeners / Lubricants and sewability improver												
Product	Brief description	Ionicity	White	Hydrophil	Antistatic	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
CERALUBE® ET LIQ	Sewability improver and yarn lubricant	D	**			***	***	*	***	**	**	**
CERALUBE® F-PEB LIQ	Polyethylene wax, nonionic detergent, in water	N	***	o		***			***	**	**	**
CERANINE® HDP LIQ	Specially for resin finishing application with very low bath pH (Moist Cure), improves "wash and wear" effects	N/D	***			***	**	*	***	**	**	**
CERALUBE® JW LIQ	Jet-stable sewability improver, suitable for white goods	(C)	**	oo		**	***	***	***	***	***	**
CERALUBE® OEW LIQ	Jet-stable softener and sewability improver for white and coloured goods	(C)	**	o		***	***	***	***	**	**	**
CERALUBE® PEP LIQ C	Polyethylene wax, nonionic detergent, in water, can be used in Moist Cure	N	***	oo		***			***	**	**	**
CERALUBE® PHD LIQ C	Concentrated HDPE wax, softener and sewability improver, additive for resin finishes and for fluorocarbon finishes	N/D	***			***			***	**	**	**
CERALUBE® SVN LIQ	Thermostable, non-sublimating, very soft sewability improver	N/D	***	o		***	**		***	***	***	**
SAPAMINE® SEW NEW	Polyethylene/paraffine wax, sewability improver with good handle characteristics	(C)	***	oo		***	***	**	***	***	***	***
TURPEX® ACN NEW	Polyethylene wax, nonionic, can be used in Moist Cure	N	***	oo		***			***	**	***	***

Fatty acid softeners												
Product	Brief description	Ionicity	White	Hydrophil	Antistatic	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
CEPRETON® UC P NEW	Granulates softener soluble in cold water	C				**	***		***	**	**	**
CEPRETON® UH P	Granulates softener soluble in hot water	C				**	***		***	**	**	**
CEPRETON® UN P	Granulates softener soluble in hot water	N	***			***	**		***	**	**	**
LEOMIN® AFK GR HC	Granulates softener soluble in hot water.	C	*			**	***		***	**	**	**
SAPAMINE® CSN	Pastille softener, soluble in warm water	C	***			***	***	***	***	**	***	***
SAPAMINE® FPG	Smooth, soft handle on all fibre types, suitable in PAC-dyebath and resin finishin. Very good salt stability	C	***			***	***	***	***	**	***	***
SAPAMINE® OC	Smooth, soft handle on all fibre types, especially soft handle on PAN-fiber	C	**			***	***	***	**	**	**	**
SAPAMINE® SFC	Soft handle for all fiber types, hydrophilic with antistatic properties, paste	D	***	oo	oo	***	***	***	***	***	***	***

Yarn lubricants												
Product	Brief description	Ionicity	White	Hydrophil	Antistatic	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
CERALUBE® ET LIQ	Yarn finishing to lower friction coefficient	D	**			***	***	*	***	**	**	**
CERANINE® HDP LIQ	Yarn finishing to lower friction coefficient	N/D	***			***	**	*	***	**	**	**
SAPAMINE® SEW NEW	Polyethylene/paraffine wax, low friction coeeficient	(C)	***			***	***	**	***	**	**	**

Special softener for fluorocarbon finishes												
Product	Brief description	Ionicity	White	Hydrophil	Antistatic	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
CERALUBE® PHD LIQ C	Concentrated softener and sewability improver for fluorocarbon finishes	N/D	***			***			***	**	**	**

LEGEND

(C)	Weakly cationic	+++++	Very High	***	Highly recomended	ooo	Excellent
C	Cationic	++++	High	**	Recomended	oo	Good
N	Non-ionic	+++	Medium	*	Suitable	o	Reasonable
A	Anionic	++	Low				
D	Amphoteric	+	Very Low	n.d.	not detectable		

STATE-OF-THE-ART REPELLENCY AND RELEASE:
PHOBOTEX®, SMARTREPEL®, NUVA® AND PHOBOL®

After several years of development, Archroma designed a completely new line of water repellent agents that are not based on fluorine: PHOBOTEX®, ZELAN™ and 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 long-lasting, efficient water repellency.

PFAS-free water repellents												
Product	Brief description	Ionicity	Water repellent	Oilrepellent	Durability	LAD	Pad	Exhaust	Cellulosic	PES	PA	Wool
PHOBOTEX® APK	Paraffin wax with Al salt, high water column, limited durability to wash, good antiwicking properties, no curing needed, e.g. for tents	(C)	+++++		+	+	***	***	***	**	**	**
PHOBOTEX® JVA	Fat modified resin, high water column, especially effective on cellulosics, does not contain crosslinker	(C)	+++++		++*	++	***	***	***	**	**	*
PHOBOTEX® NTR-50 LIQ	Dispersion of alkyl polyurethane and acrylic copolymers for all fiber types, high water repellency with soft handle and reduced chalk marking, biocarbon content >50%, does not contain crosslinker	(C)	+++++		++*	++	***	*	***	***	***	***
PHOBOTEX® R-ACE	Dispersion of paraffin wax and acrylic copolymers for all fiber types, high durable to wash and DC, low chalking, contains extender free of BO; no TSCA-registration	(C)	+++++		+++	++	***	*	***	***	***	***
PHOBOTEX® RDE / REC	Dispersion of paraffin wax and acrylic copolymers for all fiber types, durability can be improved by addition of crosslinker; RDE = Reach, no TSCA; REC = TSCA, no Reach	(C)	+++++		++*	++	***	*	***	***	***	**
PHOBOTEX® RHP-X	"Fat modified resin compound especially for cellulosics and blends, high water column, highly durable to wash, contains crosslinker free of BO"	(C)	+++++		+++	++	***	*	***	***	***	**
PHOBOTEX® RSX	Fat modified resin compound with soft handle and improvement of physical properties, reduced chalk marking, contains crosslinker free of BO	(C)	+++++		+++	++	***	*	***	***	***	***
PHOBOTEX® WS CONC / PHOBOTEX® CATALYST BC"	Silicone based system, very soft handle characteristics, especially effective on synthetics and blends, highly durable to DC, provides excellent LAD-effects, no chalking, only EU	(C)	+++++		+++	+++	***	*	***	***	***	***
SMARTREPEL® HYDRO CMD LIQ	Fluorine-free water repellent compound for cellulosics and wool, weakly cationic, high durability to wash, contains crosslinker free of BO	(C)	+++++		+++	++	***	**	***	**	**	**
SMARTREPEL® HYDRO LDS LIQ	Silicone based system with integrated crosslinking agent, good LAD-effects on polyester, no chalk marking, high temperature stability	(C)	++++		++	+++	***	*	**	***	***	*
SMARTREPEL® HYDRO PM LIQ	Dispersion of fat modified acrylic copolymer mainly for synthetic fibers, good compatibility with anionic polymers, does not contain crosslinker	(C)	+++++		+++	++	***	*	***	***	***	*
SMARTREPEL® HYDRO SPK LIQ	Paraffin wax with Zr salt, non-durable, high water column on cotton and polycotton, excellent anti wicking properties on synthetics	(C)	+++++		+	+	***	*	***	**	**	**
SMARTREPEL® HYDRO SR LIQ	Blend of MF resin modified paraffin and an acrylic polymer with integrated crosslinking agent, excellent stain repellent effects on synthetics and cotton	(C)	+++++		+++	+	***	*	**	***	***	*
SMARTREPEL® HYDRO TS LIQ	Blend of MF resin modified paraffin and a polyurethane polymer with integrated crosslinking agent, excellent peel strength with PU coatings	(C)	+++++		+++	++	***	*	**	***	**	*
ZELAN™ R3	Alkyl urethane dispersion, highest performance especially on synthetics, highly abrasion resistant, does not contain crosslinker, high biocarbon content >60%, can be branded as Teflon Ecoelite	(C)	+++++		+++	++	***	*	**	***	***	***

\*durability can be enhanced further by adding a crosslinker

Archroma’s Nuva® and PHOBOL® 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.

C6-based repellent products														
Product	Brief description	Ionicity	Water repellent	Oil repellent	Dry Soiling	Durability	LAD	Pad	Cellulosic	PES	PA	Wool	Glass fibre	
NUVA® N2114 LIQ	High performance on all types of fibres, outstanding effect level after washing, contains crosslinker	(C)	+++++	+++++	+++	+++++	++++	***	***	**	**	**	**	
NUVA® N2155 LIQ	High performance on all fiber types, excellent compatibility with anionic polymers, recommended in combination with FR, does not contain crosslinker	N	+++++	+++++	+++	+++*	+++	***	**	***	***	*	**	
NUVA® N1811 LIQ	Universal product for all types of fibres with pleasant handle, outstanding effect level after washing, contains crosslinker	(C)	+++++	++++	+++	++++	++++	***	***	***	**	*	*	
NUVA® N1802 LIQ	Universal product for all types of fibres with pleasant handle, outstanding effect level after washing, contains crosslinker	(C)	+++++	++++	+++	++++	++++	***	***	***	**	*	*	
NUVA® N2116 LIQ	Universal product for all fiber types, especially high performance on technical textiles, contains crosslinker, high durability to wash	(C)	+++++	+++++	+++	+++*	+++	***	***	**	**	*	*	
NUVA® N2159 LIQ	Recommended for high water column and fastness sensitive fabrics, especially recommended for technical textiles and awnings	(C)	+++++	+++++	+++	++++	+++	***	***	**	**	*	*	
PHOBOL® CP-C	High performance on all types of fibres, outstanding effect level after washing, does not contain crosslinker, can be Teflon™ branded	(C)	+++++	+++++	+++	+++*	+++	***	***	***	***	***	**	
PHOBOL® CP-S	Especially effective on wool and within coating applications, easy to be foamed, good compatibility with anionic polymers, does not contain crosslinker, can be Teflon™ branded	(C)	+++++	+++++	+++	+++*	+++	***	**	***	***	***	**	
PHOBOL® CP-CR	For chemical resistant finish on all fiber types, even on critical fibers (e.g. aramides) and against critical liquids, does not contain crosslinker, can be Teflon™ branded	(C)	+++++	++++	+++	+++*	+++	***	***	***	***	***	**	
PHOBOL® NW-MD	High performance product for the nonwoven application, especially for PP-SMS and PES-pulp, excellent runability properties.	(C)	+++++	+++++	+++	+++*	+++	***	***	***	***	***	**	

\*durability can be enhanced further by adding a crosslinker

LEGEND							
(C)	Weakly cationic	+++++	Very High	***	Highly recommended	ooo	Excellent
C	Cationic	++++	High	**	Recommended	oo	Good
N	Non-ionic	+++	Medium	*	Suitable	o	Reasonable
A	Anionic	++	Low				
D	Amphoteric	+	Very Low	n.d.	not detectable		



STATE-OF-THE-ART REPELLENCY AND RELEASE:  
NUVA®, PHOBOL® AND ARKOPHOB®

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

C6-based soil release products												
Product	Brief description	Ionicity	Water repellent	Oil repellent	Dry Soiling	Durability	LAD	Pad	Cellulosic	PES	PA	Wool
NUVA® N4118 LIQ	Hydrophilic soil release product mainly for cellulosic and blends, maintains hydrophilicity of fiber	(C)	+	+	++++	++++	+++	***	***	***	***	***
NUVA® N4547 LIQ	Hydrophobic soil release product for all fiber types, highly durable to wash, contains crosslinker	(C)	+++	++	++++	++++	++++	***	***	***	***	***
PHOBOL® CP-R	Soil release product with high oil repellency, good compatibility with anionic polymers, does not contain crosslinker, can be Teflon branded	(C)	+	++++	++++	+++*	+++	***	***	***	***	***

\*durability can be enhanced further by adding a crosslinker

Crosslinkers, blocked isocyanates									
Product	Brief description	Ionicity	Degree of whiteness	Pad	Coating	Cellulosic	PES	PA	Wool
ARKOPHOB® DAN NEW LIQ	Aliphatic PBI (poly blocked isocyanate), BO-free	N	***	***	***	***	***	***	***
ARKOPHOB® NTR-40 LIQ	Aliphatic PBI (poly blocked isocyanate), BO-free, 40% biocarbon content, no TSCA registration	N	***	***	**	***	***	***	***
PHOBOL® EXTENDER UXN	Aliphatic PBI (poly blocked isocyanate), BO-free	C	***	***	**	***	***	***	***
PHOBOL® EXTENDER XAN	Aromatic PBI (poly blocked isocyanate), contains BO	C	**	***	***	***	***	***	***

LEGEND

(C)	Weakly cationic	+++++	Very High	***	Highly recommended	ooo	Excellent
C	Cationic	++++	High	**	Recommended	oo	Good
N	Non-ionic	+++	Medium	*	Suitable	o	Reasonable
A	Anionic	++	Low				
D	Amphoteric	+	Very Low	n.d.	not detectable		





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**ENHANCED STRENGTH, FLEXIBILITY AND DURABILITY:  
 APPRETAN<sup>®</sup>, DICRYLAN<sup>®</sup> AND LURAPRET<sup>®</sup>**

Our dispersions have been known and valued by customers for many years, whether in nonwovens wet-bonding, 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 tailor-made solutions for customers specific requirements.

Appretan<sup>®</sup> NTR is a new generation of water-based binders that relies more on the natural and safe 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 by minimizing dependence on oil industry. Developed for the chemical bonding of nonwovens, they display excellent film forming properties and a very hydrophobic behavior. Not only the unique chemistry of this binders makes them resistant to water and mild solvent, but it also provides the needed mechanical performances.

Appretan<sup>®</sup> FF and Appretan<sup>®</sup> FFX are formaldehyde free and cover a wide diversity of applications and requirements. None of the

component being used in the manufacturing process contains formaldehyde, however trace impurities of formaldehyde can not be excluded. They are either self-crosslinking to achieve the high level of performances for technical application (water/solvent/ alcohol resistance), or non self-crosslinking with specific features and properties. General performances can be further enhanced with the addition of external formaldehyde free crosslinkers. Together with our Appretan<sup>®</sup> E, which are ultra low formaldehyde, these polymers are for the production of nonwovens and textiles that are expected to comply with the limit values of formaldehyde as defined by many labels and regulations.

Acrylonitrile copolymers display excellent solvent & dry cleaning resistances, what make them used in lots of various applications where durability is required. Due to their nitrogen content, they show an enhanced efficiency when used in combination with flame retardants, what make them particularly suitable to FR applications. Vinyl versatate copolymers are very strongly hydrophobic and have excellent resistances, what makes them suitable for long-lasting coatings.



Coating polymers & nonwoven binders, partially bio-based											
Product	Brief description	Tg	Solids	pH	Ionicity	Viscosity Bf [mPas]	Paste coating	Foam coating	padding	Flocking	Spray
APPRETAN <sup>®</sup> NTR6304 LIQ	Polysaccharide styrene acrylate copolymer, 40% bio-based, biocide free and formaldehyde free, medium soft, hydrophobic, excellent film forming property, high crosslinking capability, food contact compliant	-10	42	3.5	A	+	**	*	***		
APPRETAN <sup>®</sup> NTR6553 LIQ	Polysaccharide styrene acrylate copolymer, 30% bio-based, biocide free and formaldehyde free, medium stiff, hydrophobic, excellent film forming property, high crosslinking capability, food contact compliant	15	40	3	A	+	**	*	***		

Coating polymers & nonwoven binders, formaldehyde-free											
Product	Brief description	Tg	Solids	pH	Ionicity	Viscosity	Paste coating	Foam coating	padding	Flocking	Spray
APPRETAN <sup>®</sup> FF2100 LIQ	Acrylate copolymer, non-self-crosslinking, high tackiness	-30	60	5	A	+	***	***		***	**
APPRETAN <sup>®</sup> FF6230 LIQ	Styrene acrylate copolymer, non-self-crosslinking, ultralow VOC & emission, preferred platform for automotive interior back coatings	-17	50	7	A	+	***	***	***	**	
LURAPRET <sup>®</sup> FF8250 LIQ	Acrylate acrylonitrile copolymer, non-self-crosslinking, core-shell technology, high softness and elasticity and low tackiness	-15	50	4.5	A	+	***	***	***	***	**
APPRETAN <sup>®</sup> FFX6270 LIQ	Styrene acrylate copolymer, self-crosslinking, low temperature curing profile, hydrolysis resistant, high adhesion, affinity for glass fibers	-13	50	7	A	+	***	***	**	**	
APPRETAN <sup>®</sup> FFX1540 LIQ	Acrylate vinylversatate copolymer, self-crosslinking, very strongly hydrophobic, high water tightness, hydrolysis and weathering resistant	14	42	8	A	+	***	***	***		
APPRETAN <sup>®</sup> FF6620 LIQ	Styrene acrylate copolymer, non-self-crosslinking, low VOC & emission, heat sealable	22	50	8	A	+	***	***	***		*
APPRETAN <sup>®</sup> FFX2730 LIQ	Acrylate copolymer, self-crosslinking, low "High Heat Value"	33	50	8.5	A	+	***	***	***		
APPRETAN <sup>®</sup> FFX6730 LIQ	Styrene acrylate copolymer, self-crosslinking, high abrasion resistance	33	50	8.5	A	+	***	***	***		
APPRETAN <sup>®</sup> FFX6750 LIQ	Styrene acrylate copolymer, self-crosslinking, low temperature curing profile, hydrolysis resistant, high adhesion, affinity for glass fibers	35	50	7	A	+	***	***	**	**	

Coating polymers & nonwoven binders, ultralow formaldehyde self-crosslinking											
Product	Brief description	Tg	Solids	pH	Ionicity	Viscosity Bf [mPas]	Paste coating	Foam coating	padding	Flocking	Spray
APPRETAN <sup>®</sup> E4250 LIQ	Acrylate vinylacetate copolymer, hydrophilic, nonwoven wet-bonding	-15	50	4	A	+		**	***		***
APPRETAN <sup>®</sup> E6200 LIQ	Styrene acrylate copolymer, hydrophobic, soft component for coating	-20	50	4.5	A	+	***	***	**	***	
APPRETAN <sup>®</sup> E6441 LIQ	Styrene acrylate copolymer, hydrophilic, nonwoven wet-bonding, food contact compliant	7	50	4	A	+	***	***	***		**
APPRETAN <sup>®</sup> E6541 LIQ	Styrene acrylate copolymer, hydrophilic, nonwoven wet-bonding, food contact compliant	17	50	7	A	+	***	***	***		**
APPRETAN <sup>®</sup> E6680 LIQ	Styrene acrylate copolymer, hydrophobic, stiff component for coating	28	50	4	A	+	***	**	**	***	

**LEGEND**

<b>(C)</b> Weakly cationic	+++++	Very High	***	Highly recommended	ooo	Excellent
<b>C</b> Cationic	++++	High	**	Recommended	oo	Good
<b>N</b> Non-ionic	+++	Medium	*	Suitable	o	Reasonable
<b>A</b> Anionic	++	Low				
<b>D</b> Amphoteric	+	Very Low	n.d.	not detectable		

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 **ENHANCED STRENGTH, FLEXIBILITY AND DURABILITY:**  
**APPRETAN®**, **DICRYLAN®** AND **LURAPRET®**

Coating polymers & nonwoven binders, ultralow formaldehyde self-crosslinking											
Product	Brief description	Tg	Solids	pH	Ionicity	Viscosity Bf [mPas]	Paste coating	Foam coating	padding	Flocking	Spray
APPRETAN® N92100 LIQ	Acrylate copolymer, high bonding of nonwovens, good dry cleaning resistance	-30	45	5	A	+	**	**	***	***	*
DICRYLAN® AHS NEW	Soft butyl acrylate, excellent adhesion and cohesion, bluesign approval	-29	45	5	A	+	***	***	**	***	
APPRETAN® N96100 LIQ	Styrene acrylate copolymer, hydrophobic, soft component for coating	-20	50	3.5	A	+	***	***	**	***	
DICRYLAN® AC-01	Soft acrylate copolymer, universal use, good wash+drycleaning resistance, bluesign approval	-18	50	7	A	+	***	***	***	***	**
APPRETAN® N96101 LIQ	Styrene acrylate copolymer, hydrophobic, high acid and alkali resistance	-17	50	3	A	+	***	***	***		
APPRETAN® N94101 LIQ	Acrylate vinylacetate copolymer, hydrophilic, high water absorption	-15	50	4	A	+		***	***		***
APPRETAN® PL10073 LIQ	Styrene acrylate, hydrophobic, excellent wetting properties	-10	50	7	A	+	***	**	***		**
APPRETAN® N92111 LIQ	Acrylate copolymer, preferred binder for antimosquito finishes	-8	50	5.5	A	+	***	**	***		*
DICRYLAN® AS	Soft acrylate copolymer, nonionic with good additive compatibility, bluesign approval	-8	45	6.5	N/A	+	***	***	***	***	**
DICRYLAN® AM-01	Soft acrylate/acrylonitrile copolymer, outstanding compatibility and outdoor performance	-6	45	6	N	+	***	***	***	***	**
DICRYLAN® SAW	Core shell polymer based on butyl acrylate and silicone used for non-blocking, heat-resistant topcoats,excellent hydrolisis resistance, medium soft	-5	42	3.5	A	+	***	***	***		
DICRYLAN® B3-01	Medium soft acrylate copolymer, universal use	4	45	4.5	A	+	***	***	***	***	***
LURAPRET® D 579 LIQ	Acrylate acrylonitrile copolymer, soft with low tackiness, universal use	7	50	5	A	+	***	***	**	**	**
APPRETAN® N92121 LIQ	Acrylate copolymer, medium stiff component for coating	10	50	6	A	+	***	*	***	**	
APPRETAN® N92131 LIQ	Acrylate copolymer, good thermal stability	26	50	4	A	+	***	**	**		
APPRETAN® N94121 LIQ	Acrylate vinylacetate copolymer, hydrophilic, high shear stress stability	27	50	5	A	+		**	***		***
APPRETAN® N96131 LIQ	Styrene acrylate copolymer, hydrophobic, high acid and alkali resistance	28	50	4	A	+	**	**	***		
LURAPRET® D 888 LIQ	Styrene acrylate acrylonitrile copolymer, good mechanical properties at high temperature	31	50	8	A	+	**		***		
DICRYLAN® B5-01	Acrylate copolymer, stiff, slightly elastic, universal use, transparent and abrasion resistant	35	45	4.5	A	+	***	***	***	***	***
APPRETAN® N94151 LIQ	Acrylate vinylacetate copolymer, hydrophilic, high shear stress stability, high resilience	38	50	4	A	+		**	***		***
APPRETAN® N94950 LIQ	Acrylate vinylacetate copolymer, low blocking and good mechanical properties at high temperature	40	46	3	A	+			***		
APPRETAN® PL10070 LIQ	Styrene acrylate, hydrophobic, excellent wetting properties	44	50	7	A	+	***	**	***		**
APPRETAN® N9616 LIQ	Styrene acrylate copolymer, hydrophobic, very stiif	47	50	4	A	+	**	*	***		

Coating polymers & nonwoven binders, PU specialties												
Product	Brief description	Ionicity	Solid content	Shore hasrdness	Elongation at break [%]	Tensile strenght max [MPa]	pH	Paste coating	Foam coating	Padding	Flocking	Spray
DICRYLAN® PCF NEW	PC-PUR dispersion, stiff, flexible, excellent hydrolysis and UV-resistance, abrasion-resistant	A	35	90	300	26	7	***	***	***		
DICRYLAN® PGS	High solid, medium soft PC-PUR, excellent hydrolysis and ageing resistance, good FR compatibility, resilient stable-foam properties, bluesign approval	A	60	65	1100	30	8	***	***	***	***	
DICRYLAN® PHR	Soft PES-urethane dispersion, outstanding adhesion to PES and PA, strong hydrolysis and ageing resistance, suitable for dry lamination	A	50	55	1500	10	7	***	***	*	***	
DICRYLAN® PMC	Medium soft PES-urethane, excellent cold flexibility, slightly blocking and elastic, bluesign approval	A	50	62	800	20	6.5	***	***	*	***	
LURAPRET® N5112 LIQ	Soft and elastic PE-PU, high hydrolysis resistance, very low water absorption	A	35		950	19,6	8	***	*	***		
LURAPRET® N5127 LIQ	Medium hard PES-PU, heat sealable, hydrophobic	A	40		900	38	8	***	***	***	**	
LURAPRET® N6072 LIQ	Hard PE-PU, excellent abrasion resistance, hydrolysis resistant, suitable for resilient stiffening, duraplastic behavior	A	37				7.5	***		***		
LURAPRET® N6076 LIQ	Medium hard, elastic PES-PU, good abrasion resistance	A	40		450	25	8	***	***	***		
LURAPRET® N-DPS LIQ	Soft and elastic PES-PU, good hydrolysis and ageing resistance, excellent heat stability, no melting up to 250°C, good acid and electrolyte stability, universal use	A	40		1180	9,7	8	***	***	***	***	**
TEXAPRET® D-AK LIQ	Special PES-PU with low softening point for yarn coating	A	45		1080	35,3	8	***		**		

Handle modifiers for pad & coating application													
New Product name	Brief description	TG	Solids	Handle	White	Ionicity	Viscosity	Pad	Exhaust	Cellulosic	PES	PA	Wool
APPRETAN® EM LIQ	Vinylacetate homopolymer, wash resistant finishes with particularly firm, stiff handle	33	50	firm, stiff	***	N	+++++	***		***	***	***	***
DICRYLAN® V-KN NEW	Vinylacetate homopolymer, stiff, heat sealable	28	45	stiff	***	N	+	***		***	***	***	***
APPRETAN® MB EXTRA LIQ	Vinylacetate copolymer with an exceptional full but not board-like handle	10	55	full	***	N	+++	***		***	***	***	***
DICRYLAN® V-JM	Vinylacetate ethylene copolymer, medium soft, heat sealable	2	55	soft	***	N	+	***		***	***	***	***
APPRETAN® NI LIQ	Acrylate copolymer for padding with a full and very soft hand, compatible with additives	-20	45	very soft	***	N	*	***		***	***	***	***



ENHANCED STRENGTH, FLEXIBILITY AND DURABILITY:  
APPRETAN®, DICRYLAN® AND LURAPRET®

READY-TO-USE COMPOUNDS: TEXAPRET®

Polyurethanes for padding										
Product	Brief description	Ionicity	White	Hydrophil	Permanence	Pad	Cellulosic	PES	PA	Wool
DICRYLAN® BSRN	Polyurethane dispersion for application with easy care, moisture management and stain release finishes	N	**	ooo	oo(o)	***	***	*	***	***
DICRYLAN® PSF	Polyurethane dispersion, antipilling, bulky handle, strength improver, anti fibrillation	A	***	ooo	ooo	***	***	*	***	***
PERAPRET® PU NEW LIQ	Polyurethane dispersion, antipilling, bulky handle, strength improver	A	**	o	o	***	***	*	**	*

Specialties			
Product	Brief description	Ionicity	pH
APPRETAN® WHITE RS70 LIQ	Concentrated white pigment with high opacifying and covering properties, for foam and paste coating applications	N/A	8.5
DICRYLAN® 7836	Modified polyester resin, stiff and formaldehyde free, suitable for automotive interior	A	5.5
DICRYLAN® TA-TR	Modified polycarboxylic acid, very stiff, self crosslinking thermoset binder, formaldehyde free, bluesign approval	A	4
PERAPRET® AIR LIQ	Mineral based additive for photocatalytic air purification	A	6
TEXAPRET® BLACK C RES-02 LIQ	Concentrated and low viscosity conductive carbon black dispersion, for padding and coating applications	N	9

Compounds							
Product	Brief description	Ionicity	pH	Viscosity Bf [mPas]	Paste coating	Foam coating	Padding
DICRYLAN® M-RVBT	Ready-to-use acrylic based compound for blackout coating	A	10	**		***	
PRINTOFIX® WHITE TXB PA	Ready-to-use concentrated compound with high whiteness and covering effect, medium soft film	A	8	**	***	*	
TEXAPRET® C2810 LIQ	Ready-to-use concentrated compound for stiff and relief patterns on decoration materials	A	8	**	***	*	
TEXAPRET® C6050 LIQ	Ready-to-use acrylic based compound for foam coating of syntethic fibers for digital printing	A	9	*	**	***	***



Thickening Agents							
Product	Brief description	Ionicity	pH	Paste coating	Foam coating	Padding	Flocking
APPRETAN® THICKENER 2710 LIQ	Concentrated fully neutralized inverse thickener, high effectiveness and good stability to electrolytes	A	na	***	**		
APPRETAN® THICKENER 3308 LIQ	Partially neutralized inverse thickener, smooth behaviour	A	na	***	***	**	***
DICRYLAN® THICKENER HV 30	Water based pure acrylic universal ASE-thickener for pH range above 8 suitable for paste and foam coatings as well as padding and kiss roll applications	A	3.5	***	***	***	***

LEGEND							
(C)	Weakly cationic	+++++	Very High	***	Highly recommended	ooo	Excellent
C	Cationic	++++	High	**	Recommended	oo	Good
N	Non-ionic	+++	Medium	*	Suitable	o	Reasonable
A	Anionic	++	Low				
D	Amphoteric	+	Very Low	n.d.	not detectable		

# / DUROPLASTIC SHAPE STABILIZATION: CASSURIT® AND KNITTEX®

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.



Melamine resins											
Product	Brief description	Ionicity	pH	Free formaldehyde (%)	Film hardness	Reactivity	Stability	Nonwoven bonding	Finishing	Stiffening	Textile coating
CASSURIT® LFC LIQ	Melamine-formaldehyde crosslinking agent, low-reactive, free FA <1000 ppm, food contact compliant	N	9.5	<0.1	*	*	***		***		***
CASSURIT® MFB LIQ	Melamine-formaldehyde crosslinking agent, low-reactive	N	9.5	<0.3	*	*	***		***		
CASSURIT® HH LIQ	Melamine-formaldehyde crosslinking agent, semi-reactive	N	9.5	<0.5	**	**	***	***	**	***	***
CASSURIT® STM LIQ	Melamine-formaldehyde crosslinking agent, reactive	N	10	<0.5	***	***	**	***		***	
KNITTEX® CHN	Melamine-formaldehyde crosslinking agent,	N	9.0	<3.0	***	**	***		**	***	
KNITTEX® MLF NEW	Melamine-formaldehyde crosslinking agent, low-formaldehyde	N	9.0	<2.0	***	***	***	***	***	***	***

Catalysts	
Product	Use / Chemical base
CATALYST® CR LIQ / KNITTEX® CATALYST AP"	Catalyst for UF & MF – type
KNITTEX® CATALYST ZH	Catalyst for melamines (awnings)

LEGEND					
(C)	Weakly cationic	+++++	Very High	***	Highly recommended
C	Cationic	++++	High	**	Recommended
N	Non-ionic	+++	Medium	*	Suitable
A	Anionic	++	Low		
D	Amphoteric	+	Very Low	n.d.	not detectable
				ooo	Excellent
				oo	Good
				o	Reasonable



# ECO-ADVANCED FLAME RETARDANCE: FLOVAN®, PYROVATEX®, AND 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.

Flame retardants												
Product	Brief description	Non-durable	Semi-durable*	Durable	Classical Finishing	Water based Coating	Solvent Coating	Automotive	Cellulosics	Blends with synthetics	Polyester	Others
FLOVAN® CGN	Non-durable flame retardant finish for cotton, regenerated cellulose, polyester, polyolefins, wool and their blends, neutral hand on polyester, non-corrosive, non-fogging End use segments: automotive, building materials, mattress covers	x			x			x	x	x	x	x
PEKOFLAM® HSD LIQ	Soak-durable flame retardant finish for goods made of cotton, regenerated cellulose, polyester, wool, and their blends End use segments: upholstery (BS 5852)		x		x				x	x	(x)	
PEKOFLAM® MSP LIQ	Soak-durable flame retardant finish for cotton, regenerated cellulose, wool and their blends End use segments: mattress ticking, upholstery (BS 5852)		x		x				x	x		I-IV
PEKOFLAM® OP LIQ	Non-durable flame retardant preferably for cotton, regenerated cellulose, wool, polyester and their blends, stiffening effect on polyester, non-corrosive, non-fogging End use segments: mattress ticking, artificial velours	x			x			x	x			
PEKOFLAM® PES LIQ CONC	Wash-durable flame retardant finish for polyester End use segments: curtains, drapes, automotive			x	x	(x)		x			x	IV
PEKOFLAM® STC P	Non-durable flame retardant additive for waterborne coating applications preferably on polyester, suitable for solvent PU coatings and printing applications	x				(x)	x	x			x	I-IV
PEKOFLAM® TC203 P	Non-durable flame retardant additive for waterborne coating applications on cotton, regenerated cellulose and polyester	x				x	x		x	x		
PEKOFLAM® TC503 P	Non-durable flame retardant additive for waterborne coating applications on cotton, regenerated cellulose and polyester	x				x	(x)			x	x	IV
PEKOFLAM® TC950 LIQ	Waterbased slurry of a non-durable flame retardant additive for waterborne coating applications preferably on polyester, suitable for flocking binder and printing applications	x				x		(x)			x	I-IV
PYROVATEX® ACS	For highly wash durable FR finishes on cotton (mainly workwear) and blends with up to 50% PES part; requires special ammonia chamber; suitable to pass NFPA 2112 End use segments: protective clothing, military			x	x				x	x		I-IV
PYROVATEX® CP-LF	For highly wash durable FR finishes on cotton and cotton blends with maximum 20% PES part with reduced formaldehyde emission profile; does not require special equipment End use segments: protective clothing, military, home textiles			x	x				x	(x)		I-IV
PYROVATEX® CP-NEW	For highly wash durable FR finishes on cotton (mainly workwear) and cotton blends with maximum 20% PES part; does not require special equipment End use segment: protective clothing, military, home textiles			x	x				x	(x)		I-IV
PYROVATEX® SVC	Wash-durable FR-finish on PES by thermosol process End use segments: curtains, drapes, automotive			x	x	(x)		x			x	I-IV

LEGEND

- \* resistance to water soaking according to BS 5852
- X Recommended
- (X) Partly recommended
- () Depending on binder system





# FINISHING SPECIALTIES AND COATING ADDITIVES: 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.

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.

For optimized technical solutions, Archroma has just the right additives to make your life that much easier.

Wetting agents				
Product	Brief description	Ionicity	pH	
FLUOWET®UD LIQ	Wetting agent with non-rewetting propertiuues for fluorocarbon finishes	N	5.5	
FUMEXOL®WDN	Efficient wetting agent with non-rewetting properties for repellent finishes, especially on polypropylene nonwoven, antifoaming properties	N	5.0	
INVADINE® PBN	Efficient wetting agent with non-rewetting properties for repellent finishes	N	5.0	

Foam additives								
Product	Brief description	Ionicity	pH	Stable foam coating	Metastable foam coating	padding	Screen Printing	Flocking
AFILAN® AO1 LIQ	Amphoteric foaming and wetting agent, low impact on water and oil repellent effects	D	7	***	***	***	***	***
AFILAN® AS-OS1 LIQ	Highly efficient foaming and wetting agent for stable foam coating, biodegradable, food contact compliant	A	7	**	***		***	
DICRYLAN® STABILIZER FLN	Ready-to-use foam stabilizer formulation for polymer dispersions in stable and instable foam coating. No addition of other foaming agents necessary	A	10	***	***		***	***
KIERALON® SAS 30	Economic foaming and wetting agent, hydrophilic, biodegradable	A	7		***	***		

# FINISHING SPECIALTIES AND COATING ADDITIVES: ELFUGIN® AND OTHERS

Anti slip agents									
Product	Brief description	Ionicity	White	Hydrophil	Pad	Cellulosic	PES	PA	Wool
FORNAX® K CONC.	Silicid acid dispersion, highly effective, harsh handle	(C)	*	o	***	***	***	***	*
FORNAX® W	Silicid acid dispersion, with soft handle	(C)	*	o	***	***	***	***	*
FORNAX® W 250%	Silicid acid dispersion, with soft handle	(C)	*	o	***	***	***	***	*

Antistatic agents										
Product	Brief description	Ionicity	White	Hydrophil	Antistatic	Pad	Cellulosic	PES	PA	Wool
ELFUGIN® AKT LIQ	Antistatic agent for synthetic fibers with anticorrosive effect	A	***	oo	ooo	***	**	***	***	**
ZEROSTAT® EP	Self-crosslinkable antistatic agent for synthetic fibers with medium durability	N	**	oo	ooo	***	*	***	***	*
ZEROSTAT® FC NEW	Antistatic agent for synthetic fibers with anticorrosive effect, compatible with DWR/OWR finishes	A	***	oo	ooo	***	**	***	***	***
ZEROSTAT® NW	Antistatic agent for nonwovens (PP SMS) with low influence on hydrohead, compatible with OWR finish	A	***	oo	ooo	***	*	***	***	*

Antimigration agents				
Product	Brief description		Ionicity	White
PERAPRET FA LIQ	Antimigration agent, special additive in Color Fast Finish, "Cool handle" in combination with silicone softener		N	***

Phenolic yellowing protection										
Product	Brief description	Ionicity	White	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
STABILON® CT	Product to avoid phenolic yellowing	A	***	**	**		**	**	***	
UMIDOL® APY LIQ	Product to avoid phenolic yellowing	N	***	***	**	*	**	**	***	*
UMIDOL® NYX LIQ	Product to avoid phenolic yellowing	A	***	***	**	*	**	**	***	*

Thermic yellowing protection										
Product	Brief description	Ionicity	White	Pad	Exhaust	Jet	Cellulosic	PES	PA	Wool
STABILON® NY	Speciality product to avoid thermic yellowing in pre-heatsetting, post-heatsetting and molding processes (preferably applied in pre-setting since it absorbs formaldehyde out of air if applied at the end of process)	N	***	***					***	
UMIDOL® UT P	Speciality product to avoid thermic yellowing in pre-heatsetting, post-heatsetting and molding processes	N	***	***			*	*	***	*

LEGEND							
(C)	Weakly cationic	+++++	Very High	***	Highly recommended	ooo	Excellent
C	Cationic	++++	High	**	Recommended	oo	Good
N	Non-ionic	+++	Medium	*	Suitable	o	Reasonable
A	Anionic	++	Low				
D	Amphoteric	+	Very Low	n.d.	not detectable		