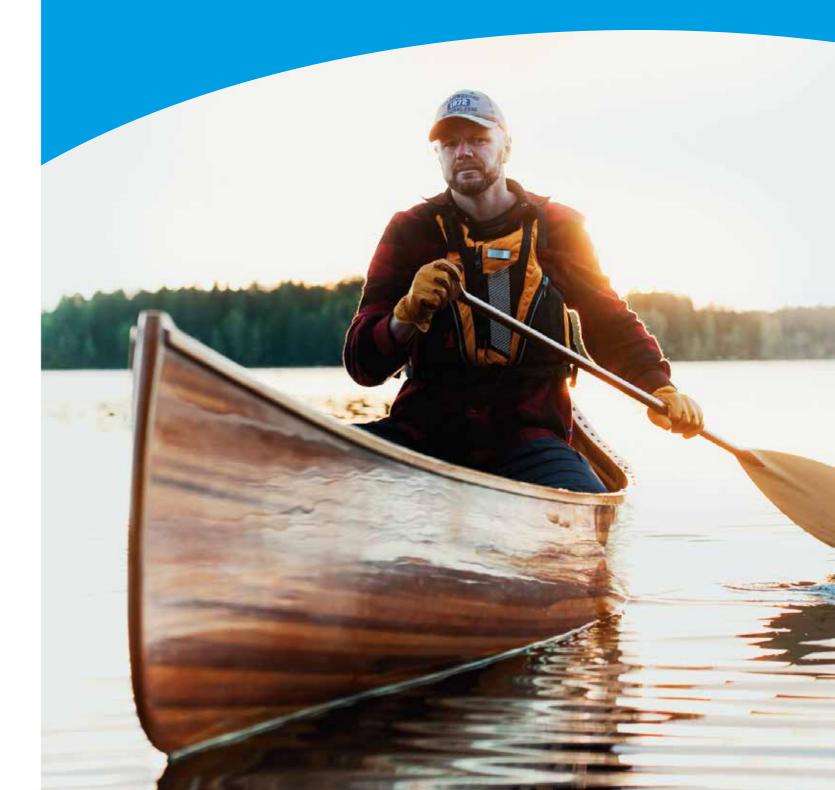




WOOD / Color, performance & sustainability. It's our nature



WOOD PERFORMANCE AND SOLUTIONS



About Archroma

Archroma is a global color and specialty chemicals company headquartered in Reinach near Basel, Switzerland. It operates with 3,000 employees over 35 countries and with 24 production sites. Its three businesses – Brand & Performance Textile Specialties, Packaging & Paper Specialties, and Coatings, Adhesives & Sealants – deliver specialized performance and color solutions to meet customers' needs in their local markets, touching and coloring people's lives every day, everywhere.

Archroma is passionate about delivering leading and innovative solutions, enhancing people's lives and respecting the planet. The company is committed to challenging the status quo in the deep belief that it can make its industry sustainable; an approach reflected in its innovations, world-class quality standards, high service levels and cost-efficiency. Products enhanced, colors enhanced, performance enhanced – "Life enhanced".

We touch and color people's lives every day, everywhere.

PROTECTION AND VISIBLE EFFECTS FOR WOOD

Archroma strives to offer products of excellent quality, as well as innovative application processes that minimize resources and maximize productivity in our customers' manufacturing.

Finishes allowing higher quality, protection and performance is what ultimately influences the buyer's decision.

Archroma, building from our experience as a leader in colors, emulsions and specialty chemicals in industries such as textile, paper and paints, has selected a solution package for wood applications.

In particular, our special emulsion range offers not just dispersion power but also delivers extra benefits and added value to the final product no matter if used in paints, coatings or as adhesive.

Discover our product selection

- 4 COLOR SOLUTIONS
- 6 SPECIAL EFFECTS
- 12 **EMULSIONS**

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COLOR SOLUTIONS



/ COLORFUL EFFECTS

Archroma's *Cartasol® and *Carta® dye portfolio for wood offers a great coloration range.

Benefits

- Excellent color shades
- Highest lightfastness
- Easy blending with wood preservatives

Application area

- Wood pressure treatment process
- Wood paints and coatings

Cartaren® Black WSP liq is a superior pigment which provides best black shading for particle and MDF boards.

It avoids the appearance of the yellow fiber shade visible on the surface sheet during construction or removal work.

Benefits

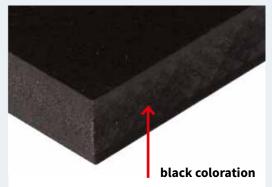
- Exceptional fixation
- Highest lightfastness
- Deepest black
- Excellent tensile strength

Application area

• Dyeing of MDF and particle boards







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^{*}These dyes are only served by a distributor in the following countries: United Kingdom, Republic of Ireland, Germany, Finland, Sweden, USA and Canada. Please contact us for further information.

SPECIAL EFFECTS



PRE-IMPREGNATION AGENTS

Appretan® PL 10073 and Appretan® N 92111 liq are plasticizers for UF resins in the preimpregnation process. There is no need to apply an additional wetting agent in the formulation. The products provide a strong hydrophobic effect and have an excellent adhesion power.

Benefits

- Easier and better processing during lamination lower risk of waves due to moisture absorption, therefore less defects of the paper
- · No ripping of the lamination sheets during loading
- Included wetting and anti-migration effect no need for an additional wetting agent
- Less brittleness and higher flexibility
- Better tear strength properties
- Increased binding properties of the particles

Application area

- Decor paper for MDF plates and particle boards
- · Laminate flooring

CROSSLINKERS

Catalyst® CR liq is a latent hardener with better effects than standard products.

Benefits

- Stronger crosslinking of the MF
- · Better steam resistance of the MF coating

Application area

- Decor paper for MDF plates and particle boards
- Laminate flooring

Cassurit® LFC liq and **Cassurit® RLF liq** are low formaldehyde low reactive and medium reactive MF resins.

Benefits

- · Low formaldehyde resin
- Contains < 1000 ppm free formaldehyde

Application area

- Decor paper for MDF plates and particle boards
- Laminate flooring

ANTI-FINGERPRINT AND BLOCKING AGENTS

*Nuva® N6336 liq is a unique product which can be added directly to the MF resin (melamine formaldehyde) coating of decor paper in order to avoid fingerprints on decor paper used for MDF plates. The product reduces these marks which naturally occur during daily contact.

* Product not available in the USA and Canada

Arkophob® FFR liq is a blocking agent which prevents the coated decor paper from sticking together during high temperature and moisture conditions. It protects the pre-impregnated and coated paper during the storage time before the lamination onto the particle boards and MDF plates.

Benefits

- · Anti-fingerprint effect during handling
- Excellent oil and water repellence
- No impact on transparency, dullness or glossiness of MF coatings

Application area

- Decor paper for MDF plates and particle boards
- Laminate flooring

Benefits

• Highly efficient anti-blocking effect even under extreme temperature & moisture conditions

Application area

- Decor paper for MDF plates and particle boards
- Laminate flooring

WET AND OIL REPELLENCE BOOSTER

Fluowet® MA 600 is directly used as copolymerization with the MF resins in a UV curing formulation. It boosts properties of anti-grease marks during handling and provides oil and water repellence.

Benefits

- Improvement of wet and oil repellence properties
- Improvement of stain resistance of the coating

Application area

- Decor paper for MDF plates and particle boards
- · Laminate flooring

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NOVOGARD® MINERALS: MICRO-SCRATCH PROTECTION

*Novogard® CPL (Sapphire platelets)

delivers the best protection against microscratches, particularly visible on dark and glossy, colored panels, for high-end laminate flooring or kitchen laminates.

*The product is also available as stable 50% aqueous suspension, Novogard® CPL liq

Benefits

- Improvement of wet and oil repellence properties
- · Improvement of stain resistance of the coating
- Highest micro-scratch resistance (EN 16094, Rating 5/5)
- Very high gloss effects
- Enhancement of color brilliance with decor papers

Application area

- Decor paper for HDF/MDF plates and particle boards
- · Laminate flooring
- Kitchen decors

Novogard® CPL 1. Wear or overlay layer 2. Decorative paper 3. HDF core or board 4. Backer paper





TOP COAT UV-CURING

Fluowet® MA 600 is directly used as copolymerization with the MF resins in a UV curing formulation. It highly boosts effects like stain resistance and provides excellent all-over protection.

Benefits

- Improvement of wet and oil repellence properties
- · Improvement of stain resistance of the coating

Application area

- Decor paper for MDF plates and particle boards
- Laminate flooring

ANTI-WEATHERING PROTECTION

Fixapret® CP liq c is a patented wood modification product.

Used in the pre-impregnation process, it develops a high cross-linking effect of the cellulose molecules during poly-condensation.

Benefits

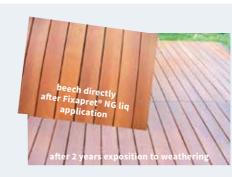
- High resistance against wood-destroying fungi
- Use in classes 3 (above) and 4 (in ground contact)
- Durability class 1-2 ("very durable") can be reached according to CEN/TS 15083
- High dimensional stability (anti-shrink efficiency of approx. 50%)
- Increased surface hardness
- Moisture content reduced at high relative humidity level
- Improved weathering performance (lower maintenance of coating systems)
- Wood is still wood optical appearance almost unchanged

Suitable wood-based products

- · Solid wood
- Veneers
- · Wood-based composites (plywood, particle boards)
- Wood plastic composites (WPC)

Application area

- · Window and high-end joinery
- Outdoor/garden furniture
- Façades
- Fastening elements in agriculture (e.g. vineyard posts)
- Marine application
- Deckings
- Parquet flooring













UV PROTECTION

Fadex® AS (liquid type) and Fadex® AS TTR (high concentrated powder type) are UV absorbers used in wood protection agents and coatings.

The sun's color shifting effects on wood are obvious to anyone who has moved a piece of furniture to discover that the wood flooring underneath shows a different color than the rest of the room.

This color change is primarily resulting from UV light or artificial light sources. Beside the color shift, it also indicates degradation of the wood itself, compromising durability and structural integrity. Fadex® AS TTR incorporated into a clear coating or paint can prevent both undesirable aesthetic

and material changes.

Benefits

- Excellent UV protection
- High color protection
- Prevents aesthetic changes

Application area

• Wood protection coatings and agents

Good boost of anti-yellowing

/ FLAME RETARDANTS FOR MEDIUM DENSITY FIBERBOARD

Pekoflam® OP or Pekoflam® TC305 are high performance additives for formaldehyde-free fire protection, when combined with our range of formaldehyde-free adhesive resins, while **Pekoflam® TC303** is a more economic option for melamine faced MDF panels.

Benefits

- Halogen- and antimony-free fire protection to meet Euro Class B and C requirements for building regulations according to BS EN 13501
- Improvement of fire resistance and increased escape time

Application area

- Wall linings
- Partitions
- Ceilings







EMULSIONS



COATINGS, ADHESIVES & SEALS

Archroma offers coatings, adhesives and sealants for a wide range of applications. Literally thousands of satisfied customers have witnessed the outstanding success of Archroma's Mowilith® emulsions since its first patent was obtained in 1912.

Thanks to continuous investments in research and development we are always striving to provide environmentally responsible and sustainable product options. Water-based and tailor made for your needs, Mowilith® emulsions can greatly contribute to successful product formulations and offer competitive advantages in a variety of industries.

Key Markets:

Paints	Decorative interior/exterior, primers, varnishes, industrial applications
Construction	Concrete applications, roofing, tiling, sealants, primers, mortars admixtures
Adhesives	Wood, paper, lamination, packaging and pressure sensitive adhesives
Specialties	High performance products, special market niches, nanotechnology, eco-advanced products

THE ARCHROMA LOW EMISSION CONCEPT

The Archroma Low Emission Concept aims at creating eco-advanced products.

The concept combines the requirements of recognized institutes and organizations such as Green Seal and the EPA for offering environmentally friendlier products without loss in performance.



Check for this icon for products that meet the Archroma Low Emission Concept requirements:



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/ STAIN VARNISHES & WOOD ENAMELS

Mowilith® LDM 7410, LDM 7416, LDM 7451 and **LDM 2250** are easy to apply and provide excellent protection properties against weathering.

Benefits

- Low Emission Concept
- High UV resistance
- High water resistance
- High gloss and surface hardness
- Superior gloss retention compared to traditional acrylic and alkyd solvent dispersions
- No blocking behavior
- Excellent weathering resistance
- Very good adhesion on the substrate

Application area

- Parquet and furniture clear varnishes
- Industrial wood coatings (to substitute nitrocellulose based varnishes)

Mowilith® LDM 7451 is based on our core shell technology showing no cracks after exposure to sun light. The coating maintains its protection performance and delivers a longer durability to the wood compared to competition and common products used.

Anti-yellowing effect in relation to alkyd products



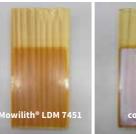
Excellent adhesion properties



UV resistance

Unexposed

Exposed area 1200h







/ CLEAR VARNISHES

Mowilith® LDM 7461, LDM 7460 and (LDM 7601) provide the needed balance between hardness and flexibility. Choose the effect you need, a high gloss shine (LDM 7460) or a clear appearance.

Benefits

- Good blocking & chemical resistance
- · High scratch resistance
- Highest gloss and shine
- Best clear appearance
- Good sanding properties

Application area

- Parquet and furniture clear varnishes
- Industrial wood coatings (to substitute nitrocellulose based varnishes)

Consumers are looking more and more for a sustainable healthy lifestyle whilst at the same time longing for value retention, longevity and versatility of their living space.

Wood is multifaceted and provides new opportunities, adapting to every style and taste. Therefore, it comes as to no surprise that wood is still a clear favorite as a building material for houses and furniture. Living and building with wood continues to be an important trend. Whether designing interiors, floorings, walls, ceilings or interior doors.

The varnish market is expected to follow the same trend.



STAIN VARNISHES & WOOD ENAMELS

Mowilith® LDM 2250 is based on our core shell technology showing no cracks after exposure to sun light. The coating maintains its protection performance and delivers a longer durability to the wood compared to competition and common products used.

Benefits

- Low Emission Concept
- High UV resistance
- High water resistance
- High gloss and surface hardness Superior gloss retention compared to traditional acrylic and alkyd solvent dispersions
- No blocking behavior
- Excellent weathering resistance
- Very good adhesion on the substrate

Application area

- Parquet and furniture clear varnishes
- Industrial wood coatings (to substitute nitrocellulose based varnishes)

High gloss performance for exterior applications

Mowilith® DM 772 provides excellent gloss and protection properties against weathering.

Benefits

- High gloss appearance
- Excellent weathering resistance
- Good adherence on aged surfaces painted with alkyd paints

Application area

Outdoor furniture

Unexposed







Exposed area 1200h







Mowilith® LDM 2250



VARNISH SPECIALTY – ONE PRODUCT, 4 APPLICATIONS

Terpolymer dispersion based on acrylic esters nanotechnology

Appretan® LDM 2801 and Mowilith® LDM 2801











promoter

Benefits

- Excellent water resistance for coating and primers
- · High efficiecy primer
- Excellent efficiency adhesion
- · Very good surface sealing
- Additive booster
- High performance protection incl. against fungus
- Prevents surface migration of colors

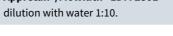
Application area

- Primer for wood and concrete
- Hydro-repellent top coatings
- Adhesive promoter
- Additive

1. Penetration primer

Appretan®/Mowilith® LDM 2801 provides a high penetration into the substrate compared to conventional primers. Due to its low particle size, it penetrates more deeply and homogeneously into the material.





3. Adhesion promoter (primer)

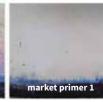
Better adhesion of the coating to the substrate dilution 1:5 to 1:10.

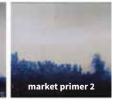
4. Additive

Appretan®/Mowilith® LDM 2801 as additive together with waxes or multi-cleaner floor products. Appretan®/Mowilith® LDM 2801 can be mixed with conventional cleaners or floor polish waxes to give a better protection of the floor, and less dirt pick-up of the floor joint fillers. Addition of 0,5 % to 2,0% in the final formulation.









Absorption by capillarity, colored solution, evaluation after 3 hours of immersion









Figure 1: Adherence on concentre with and without Appretan® LDM 2801









ADHESIVES

The following products meet the requirements of the European Standard EN 204 classifying wood adhesives into the durability classes D1 to D4.

D1 Classification Mowicoll® HL 203 Mowicoll® WP 400 The products meet the D1 requirements where interior furniture is occasionally exposed to < 50°C for a short period and where the moisture content of wood is set to a max. of 15%.

D2 Classification Mowicoll® Super Mowicoll® Carpintero Mowicoll® Rapido The products meet the D2 requirements where interior furniture is occasionally exposed to leakage or condensation of water and/or to occasional high humidity. The moisture content of wood does not exceed 18%.

D3 Classification Mowilith® DHWA Mowilith® 2555 W Mowicoll® WP 444 The products meet the D3 requirements where interior furniture is frequently exposed to dripping, condensation and/ or high humidity. Included is outdoor furniture not exposed to the weather.

D4 Classification

Mowilith® LDL 2517W -Bi component Mowicoll® 1 K -Mono-component Mowicoll® WP 460 -Mono-component The products are crosslinking modified homo-polymers meeting the D4 requirements. The furniture is exposed to frequently long term dripping or condensation water. It is exposed to the weather but with an adequate protection by a surface coating.

Application area

- Universal gluing of woodworking artifacts
- Decorative laminates
- Furniture assembly
- Gluing through cold pressing process

Application area

- Universal gluing of woodworking artifacts
- Decorative laminates
- · Furniture assembly
- Gluing through cold pressing process

Application area

- Finger joints artifacts
- Panels and frames
- Lamination of plastic veneers
- Gluing through high frequency, cold and hot pressing process

Application area

- · Wooden artifacts gluing and porous materials in general
- Gluing through high frequency, cold and hot pressing process
- Mowilith® LDL 2517W must be used together with Catalyst P627
- Gluing through high frequency, cold and hot pressing process

BINDER FOR WOOD MOULDINGS COATING

Cola Mowilith® WT-B, Mowicoll® Trefila MDF, Mowicoll® Trefila MS

Poly-vinyl acetate in aqueous emulsion

Benefits

- High compatibility with inorganic fillers
- · Excellent glossy and smooth finish

Application area

- Frames
- Compatibility with inorganic fillers such as gypsum, titanium oxide and calcium carbonate

ADHESION PROMOTER FOR WOOD MOULDINGS COATING

Appretan®/Mowilith® LDM 2801

Terpolymer dispersion based on acrylic esters nanotechnology classes

- Nanotechnology
- · Eco-advanced formaldehyde-free product
- Increases water resistance on systems with plaster
- Product may be diluted for use

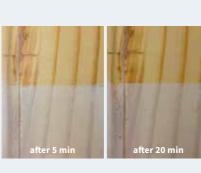
Benefits

- Providing highest water resistance for coating and primers
- · Increase adhesion for coating and primers

Water resistance

Wood

Wood/ plaster + Mowilith® LDM 2801



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/ OVERVIEW

Recommended indoor applications

		SPECIAL WOOD APPLICATIONS					WOODWORKING ADHESIVES								
PRODUCT	SUSTAINABILITY	Wood stains	Wood sealers	Wood primers	Wood coatings	Stain blocking	Furniture varnishes	High gloss enamels	D1	D2	D3	D4	Wood mouldings	Adhesion promoter	AVAILABIITY
RECOMMENDED INDOOR	APPLICATIONS														
RECOMMENDED INDOOR Appretan® LDM 2801	APPLICATIONS Low Emission Concept	••	••	••											EMEA
			••												EMEA AMERICAS
Appretan® LDM 2801	Low Emission Concept														
Appretan® LDM 2801 Mowilith® LDM 2801 Mowilith® LDM 7460	Low Emission Concept				<u></u>		••								AMERICAS
Appretan® LDM 2801 Mowilith® LDM 2801 Mowilith® LDM 7460 Mowilith® LDM 7461	Low Emission Concept														AMERICAS AMERICAS
Appretan® LDM 2801 Mowilith® LDM 2801	Low Emission Concept				••		••								AMERICAS AMERICAS AMERICAS

LEGEND

- Recommended
- •• Highly Recommended

Recommended outdoor applications

		SPECIAL WOOD APPLICATIONS						WOODWORKING ADHESIVES							
PRODUCT	SUSTAINABILITY	Wood stains	Wood sealers	Wood primers	Wood coatings	Stain blocking	Furniture varnishes	High gloss enamels	D1	D2	D3	D4	Wood mouldings	Adhesion promoter	AVAILABIITY
RECOMMENDED OUTDOO															
Appretan® LDM 2801	Low Emission Concept	••	••	••										••	EMEA
Cola Mowilith® WT-B	_														AMERICAS
Mowicoll® 1 K – Mono-co	omponent														AMERICAS
Mowicoll® Carpintero															AMERICAS
Mowicoll® HL 203									••						AMERICAS
Mowicoll® Rapido										••					AMERICAS
Mowicoll® Super	_									••					AMERICAS
Mowicoll® Trefila MDF	_												••		AMERICAS
Mowicoll® Trefila MS	_												••		AMERICAS
Mowicoll® WP 400									••						AMERICAS
Mowicoll® WP 444											••				AMERICAS
Mowicoll® WP 460 – Mon	io-component														AMERICAS
Mowilith® 2555 W											••				AMERICAS
Mowilith® 727 M		•	••		•										ASIA
Mowilith® DC 800		••	••		•		••								ASIA
Mowilith® DC 807		••		••											ASIA
Mowilith® DC 818		•	•			••									ASIA
Mowilith® DC 850		•••			•••										ASIA
Mowilith® DC 865		•••		•	••		••								ASIA
Mowilith® DC 871			•	-											ASIA
Mowilith® DC 890			_												ASIA
Mowilith® DHWA															AMERICAS
Mowilith® DM 772															AMERICAS, TURK
Mowilith® DM 777					•••		—	_			—	—			ASIA
Mowilith® DM 799	_	<u></u>	_		·										ASIA
	_						<u>.</u>								-
Mowilith® DN 6565			<u>.</u>												ASIA
Mowilith® DN 6767	_				••										ASIA
Mowilith® DN 7070		•	••		<u>·</u>										ASIA
Mowilith® DN 7171	_		•												ASIA
Mowilith® DN 7777	_	<u>·</u>			<u>·</u>										ASIA
Mowilith® DN 7979	_	•••			•		•								ASIA
Mowilith® LDC 7064		•			•										ASIA
Mowilith® LDC 7067	_		••				_•_								ASIA
Mowilith® LDC 7154		••	•		••										ASIA
Mowilith® LDL 2517W – E	Bi component														AMERICAS
Mowilith® LDM 2250		••	••		<u>.</u>										AMERICAS, ASIA
Mowilith® LDM 2801	Low Emission Concept	••	••	••										••	AMERICAS, ASIA
Mowilith® LDM 6150			•			••									ASIA
Mowilith® LDM 7410	Low Emission Concept	••			••			•							AMERICAS,ASIA
Mowilith® LDM 7451	Low Emission Concept	••					•	•							ASIA
Mowilith® LDM 7667		••	••	••											AMERICAS, ASIA
Mowilith® LDM7416		••			•		•	•							ASIA
Mowilith® LDM7766		••		••											ASIA
Mowipur® 1311															ASIA
Mowipur® 1515		•	••		•		••								ASIA
Mowipur® 1711		-	•	•••		-									ASIA

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