

**ROMA®****LOWCER® VARNISH EXTERIOR****TECHNICAL DATA SHEET****TDS****EXTERIOR | ACRYL-POLYURETHANE WATERBORNE VARNISH  
ENVIRONMENTAL LOW IMPACT PAINT PRODUCT FOR EXTERIORS****FIELDS OF APPLICATION**

A sealer and finish varnish for all exterior wood surfaces, particularly for windows and doors, providing good UV protection, excellent protection against water, oils and inclement weather conditions. LowCer Varnish Exterior is an impregnating varnish, unlike most varnishes which are directly applied to a wood surface, LowCer Varnish Exterior penetrates the cellulose fibers of all types of woods, deciduous and conifer, thus creating a long lasting sealer and protector for exterior wood surfaces. LowCer Varnish Exterior is oil proof and highly water resistant.

LowCer Varnish Exterior diluted according to instructions can be diluted to use as a wood conditioner, pre-sealer for stain applications, and at any dilution can be tinted lightly or darkly depending on desired color finish. LowCer Varnish Exterior permits excellent touch-up capability for repairs.

LowCer Varnish Exterior can be applied to virgin wood surfaces that have not been previously sealed. Product is non-yellowing.

**PRODUCT FEATURES**

An acryl-polyurethane water based varnish that contains very low solvent content, features medium-high scratch resistance, is fast drying, oil proof and highly water resistant. LowCer Varnish Exterior surpasses professional requirements for use on exterior wood applications with high UV resistance, good scratch resistance, is non yellowing, and easy to apply using brushes or sprayers. LowCer Varnish Exterior is a mono component, concentrated product, which is diluted with water for application, providing excellent coverage with 3 coats. Coverage per square foot is above average typical of most varnishes. LowCer Varnish Exterior can be used residentially and commercially for exterior furniture, cabinets, window and door treatments, on any type of wood product, without sustaining water damage or wood discoloration by water penetration.

LowCer Varnish Exterior can be diluted with water for multiple use functions and can be tinted with natural oxide earth tints and 0% VOC colorants to offer esthetic color options with minimal impact to the environment. LowCer Varnish Exterior is an environmental low impact paint material as described in the Eco Category description. This product is ideal for use in homes, schools, and hospitals and work sensitive areas.

**TYPE OF PRODUCT**

Surface finishes varnish classification UNI 8681, in water emulsion base, mono-component and air drying, Acryl-polyurethane.

**SHEEN FINISH**

Satin

**COLOR**

Transparent Base. Color tint up to 15% max with approved tints. Custom color tints matching are available.

**TECHNICAL DATA**

CRITERIA	INT. STANDARD	VALUE	UNIT
TVOC & VOC (including tint pigments)	2004/42/CE: Max. Value 130 g/l (2010), ISO 11890-2	15	g/l
Surface Retention Smog/Dirt	EN 10795	3	Very Low
Damp Abrasion Resistance (Gardner Cycles)	UNI 10560	≥ 5000	Excellent
Drying Time at Low Temperature	UNI 10793	Yes	-
Application Quality	UNI 10794	Excellent	-
pH Value	DIN 19266	8 - 8.5	-
Alkaline Resistance	UNI 10795	Yes	-
Specific Gravity (23°C)	EN ISO 2811-2	1.03	g/ml
Gloss Level	UNI EN ISO 2813	10	Opaque
Reaction to Fire	EN 13501-1:2002	A1	Incombustible
Toxicity	EN 13501-1:2002	Non-Toxic	-
Scratch Resistance	DIN 68861/81 P4	4	-
Surface Hardness	DIN 68861	800	RA (Cycles)
Resistance to Chemical Agents	ONORM A 1605-15 (1B1)	Good	-
Child Toy and Furniture safe	EN 71	Yes	-
Heavy Metal Content Lead and Chrome	2002/95/CE	None	-
Vapor Absorption	UNI 927-4	35%	RMPA
Vapor Release	UNI 927-4	70%	DMP
Vapor Diffusion from Surface Permeability	UNI 927-5	> 140	g/m <sup>2</sup>
Accelerated Aging Resistance	EN 927-3	Good	-
APEO (Alkyl Phenol Ethoxylates)	-	0%*	Low content
PEG (Polyethylene Glycol)	-	0%*	Low content
Formaldehyde	-	0%*	Low content
PG (Propylene Glycol)	-	0%*	Low content
Biocides	-	0%*	Low content

Does not contain chemicals that can aggravate or cause asthma, see NIH Asthma Report 2012.

**\* This product contains no substances classified as hazardous to health or the environment pursuant to the provision of Directives 67/548 CEE and regulation (CE) 1272/2008 (CLP) and subsequent amendments.**



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## APPLICATION CYCLE INSTRUCTIONS

### BRUSH APPLICATIONS

**1ST COAT :** Dilute LowCer Varnish Exterior with 50% water, maximum 5 liters of water per one (1) 10-Liter bucket of LowCer Varnish Exterior. Apply varnish with a high quality brush in an even and constant pattern, so that a perfect coverage is achieved. Allow to dry for at least 4 – 8 hours before applying 2nd coat. Wash paint brushes immediately with soap and water after completion of use. It is advised not to use rollers for high quality finishes. Allow LowCer Varnish Exterior to dry naturally, do not use dryers, heat guns, or heat lamps to force dry product. LowCer Varnish Exterior should be tinted a minimum 5% with natural oxide color pigments to increase UV protection. It is not recommended to apply LowCer Varnish Exterior without tinting the varnish prior to application on wood.

**2ND COAT :** Dilute LowCer Varnish Exterior with 20% water, maximum 2 liters of water to one (1) 10-Liter bucket. Apply varnish in an even and constant pattern, so that a perfect coverage is achieved.

**3RD COAT :** Dilute LowCer Varnish Exterior with 10% water, maximum 1 liters of water to one (1) 10-Liter bucket. Apply varnish in an even and constant pattern, so that a perfect coverage is achieved.

### PAINT SPRAYERS

**1ST COAT :** To provide sufficient mil thickness and protection from oils and water, apply 2 coats with a brush on all wood surfaces (see brush instructions above), lightly sanding or steel wool to remove undesirable textures, before applying a spray finish. Spray 3rd coat application of LowCer Varnish Exterior with a water dilution of 0 – 10% maximum. Remove all dust from surfaces carefully, using a tack cloth or soft rag prior to applying LowCer Varnish Exterior with a sprayer. Spray at an even distance and in a consistent pattern to provide a professional finish.

**2ND COAT :** Application with a 2nd coat is not necessary except in the case to increase the level of the quality of the finish. Maintenance of spray equipment is a priority to create excellent finishes.

**SPRAY TIP USAGE :** Apply paint product with a # 0.011 – 0.013 mm size spray tip for airless sprayers and compressor spray guns. Always use new spray tips for starting a paint job for best results. Test spray capacity of spray tip before starting production work. This will also conserve the amount of paint necessary to complete the job.

## MIXING VARNISH & WATER

Most of our paint and varnish formulas are concentrated and require water to be added to them for proper use. This process means we can sell more coverage in an economic package that decreases the cost for transport, reduces the carbon footprint, helping the your pocket book and the environment.

**Mix Varnish And Water With An Electric Drill And Paint Paddle For Large Quantities At The Lowest Velocity, Or Mix Well By Hand! If Water Is Sitting On The Top Of Your Mixture, The Paint Is Not Properly Mixed!**

## TOOLS

Apply with a high quality brush or with an appropriate sprayer and sprayer tip. New sprayer tips should be used to prevent product waste and provided for a more perfect finish.

## DRYING TIME

Allow a drying time between coats of at least 4 – 8 hours. For application on furniture and cabinets, drying time will depend on size of area painted, humidity, heat, cold; allow 4 hours minimum, test for dryness before applying a 2nd coat. Optimum time allowance is 8 hours between coats.

LowCer Varnish Exterior is usually tack free in 2 – 4 hours depending on humidity and temperature. With lower temperature and humidity more time may be needed. If sanding is required between coats, allow 24 hours of drying prior to sanding. When possible, allow 72 hours to permit proper handling and transport after application of final coat. Allow 14 days to achieve maximum durability and strength. Avoid exposure to water and ice for at least 7 days, and great care must be given to avoid over extended exposure to water until 14 days has passed. Ideal temperature for application is between 18°C / 60°F – 29°C / 85°F.

## CONSUMPTION/COVERAGE

Approximately 2,000 ft<sup>2</sup> / 186 mt<sup>2</sup> average per 10 liters bucket, 1 coat, diluted 20% – 50% when applying 3 coats. Approximately 200 ft<sup>2</sup> / 18.7 mt<sup>2</sup> average per 1 liter bucket, 1 coat, diluted 20% – 50% when applying 3 coats. Approximate US Gallon equivalent coverage 756 ft<sup>2</sup> for 1 coat coverage. Determine exact consumption by performing a test on the surface to be treated.

## PACKAGING

Plastic buckets of 1, 2.5, 5 and 10 liters.

## APPLICATION CYCLES ON DIFFERENT TYPES OF BASES

Make sure base is solid, dry and well cleaned, prepared with skill. It is recommended to observe the rule VOB DIN 18 363, Part C, paragraph 3.

### VIRGIN WOOD

Exterior wood surfaces should be pre-sanded as required by a professional finisher. If a stain color is desired, for most light and medium/dark stain colors, LowCer Varnish Exterior can be tinted and applied to virgin wood surfaces. For deeper/darker wood stains apply LowCer Stain to wood according to instructions (see LowCer Stain instructions). LowCer Varnish Exterior can be used as a conditioner (see LowCer Stain Instructions, Section; **CONDITIONER FORMULA**). Follow with 1st application of LowCer Varnish Exterior diluted at 50% with water, and apply 2nd and 3rd coat according to instructions indicated above.

### EXISTING VARNISHED/PAINTED WOOD

LowCer Varnish Exterior cannot be applied over previously varnished or painted wood, except in the case where LowCer Varnish Exterior has been applied previously. For re-coats, it is suggested to clean surfaces with water and a mild dish detergent (diluted with water) or all purpose cleaner (see **AVOID USING THESE CLEANING PRODUCTS** Section below), to remove all dirt, dust and debris, remove any cracked or damaged varnish, and re-apply 1 coat of LowCer Varnish Exterior diluted with water at 10%. For more aged surfaces re-apply 2 coats of LowCer Varnish Exterior, 1st coat diluted with water at 20%, and the 2nd coat diluted with water at 10%. Any applications should be done with a brush.

### NEW WOOD CABINETS & FURNITURE

Solid wood cabinets and furniture should be pre-sanded as required by a professional finisher. If a stain color is desired, apply LowCer Stain to wood according to instructions, and any additional applications as may be required such as lime wash or consolidator. Ceruse finishes using BioCalce Classico and TerraMare Velatura must be sealed with a 1st coat application of LowCer Varnish Matte or Satin diluted with water at 50% (see LowCer Stain Technical Data Sheet, Section: **FLOORS; STAIN & LIME WASH**). Allow all pre-varnish finishes to dry 8 hours before application of any varnish. After 1st coat of interior varnish on ceruse finish, apply 3 coats of LowCer Varnish Exterior as indicated in instructions above. Brush application is recommended. Cabinet and furniture finishes require at least two (2)-coats of LowCer Varnish Exterior be applied by brush to provide sufficient mil thickness for protection against oils and water. A 3rd coat may be sprayed to create a smooth luster finish.

### VENEERED WOOD

LowCer Varnish Exterior is ideal for solid wood but depending on the type of veneer, what type of glues and or veneer system used, the type of base the veneer was attached to, may be problematic for the penetration of LowCer Varnishes into veneered wood surfaces. To facilitate proper penetration on wood veneers, dilute LowCer Varnish Exterior with water 100%, and allow drying. Then follow instructions applying LowCer Varnish diluted 50% with water, 2nd coat, and then 20% diluted for the 3rd coat, and finally 10% dilution for the 4th coat. Perform several tests to verify adherence and durability prior to beginning commencement of the application of your finishes. Some wood veneer systems will not permit penetration of varnish. It is highly recommend to not use veneered wood finishes for any exterior environments where such wood types are directly exposed to sun or incimate weather conditions.

## PAINTED FINISHES

LowCer Varnish Exterior can be applied to new water-based paints, providing that careful tests have been performed to assure adherence to such materials. All pre-painted finishes on wood require that they be lightly sanded so as permit penetration of LowCer Varnish Exterior into the surface pores of the paint. These types of applications do not guarantee that sufficient adherence will provide proper resistance to sun and inclement weather, and no guarantees implied or non-implied can be provided when applying varnish over any type of water based or solvent based paint.

## SLAKED LIME PLASTERS & STUCCOS

LowCer Varnish Exterior should not be applied to slaked lime plasters and stuccos like BioCement GF, BioMarmorino Satin exposed to the environment.

## DECAYING OR CRUMBLING STUCCOS OR POWDERY SURFACES

LowCer Varnish Exterior should not be applied to any type of stucco product exposed to the environment.

## STORAGE

Store in a cool, dry and protected from frost. Close the open containers with care. Store liquids only in plastic buckets.

## WARNING!

**Do not apply any products in direct exposure to strong/hot sunlight, rain, high humidity (mist) or in the presence of strong wind. Beware of the danger of frost overnight. If applied by roller or sprayer, protect surrounding surfaces as necessary. Protect eyes and skin from splashes of paint. Cover glass, ceramic, natural stone, brick, metal, wood, painted surfaces and glazed tiles. Clean affected areas immediately with water. Prominent elements of the building (cornices, parapets, etc.) should be treated with skill, covering flashings, gutters, copper coatings, etc. ...**

**Do not work in air temperature lower than 10°C / 50°F. Clean work tools with water immediately after use. Keep out of reach of children. In case of contact with eyes and skin, wash immediately with plenty of water. In cases of consumption, consult a Doctor or call the CDC Poison Center (see Safety Data Sheet).**

## AVOID USING THESE CLEANING PRODUCTS!

Aggressive cleaners can damage Acryl-polyurethane Waterborne Varnishes. Do not use vinegar, lemon, or orange based degreaser cleaning products, chemical or commercial degreaser, such as Clorox brand Formula 409 products, or Clorox brand toilet bowl cleaners, or any similar type products, which also contain degreaser capabilities, as these types of products will permanently damage or remove waterborne floor finishes, stains and varnishes. Commercial finishers and floor applicators have requested that most commercial or industrial cleaning products not be used as most of their cleaning products will damage Acryl-Polyurethane Varnishes. For further information about these products it is advised to research on the internet about how these products can affect your wood product finishes and their environmental impact in general.

Professional floor finishers recommend to clean water based varnishes, with non citric, plant based cleaning products such as Method brand All Purpose Cleaner or Bona Hardwood Floor Cleaner for best results.

## WATER CONTAMINATION HAZARD

### CLASS 1

This product has been classified in accordance with the hazard criteria of the Controlled Products Regulations (CPR) and the MSDS contains all of information required by the CPR, and it is classified as a non-hazardous material.

## PRODUCT CONTAMINATION HAZARD

**CODE CER / NORMATIVE EAC / Decision commuted by the Commission n. 2000/532/CE**

### NOT DANGEROUS

The directive 75/442/CEE, 08 01 production, disposal, formulation, supply, use, and removal of paints and varnishes: 10 13 04 for removal of paints and varnishes; 10 13 04 disposal of lime and hydrated lime products.

## DISPOSAL

Do not enter product in its original concentration into drains or open waters. Do not store at public waste disposal sites. In case of conduction into adapted biological purification plants no disturbances need be expected. The preparation has been estimated by conventional method (calculated-procedure) of EG directive 1999/45/EG) and is classified as non-hazardous for the environment.

Dispose according to local regulations. Empty cans should be disposed of according to local regulations; plastic buckets are 100% PBS, NO. 5, approved for food storage; 100% recyclable if cleaned thoroughly prior to recycling.

## ADDITIONAL INFORMATION

This Technical Sheet lists data collected on the basis of technique and experience. Given the multiplicity of use of the product they cannot be binding and the user cannot refrain from using common sense and experience for the individual case. This information shall not constitute any legal obligation and no obligation from the seller or point of purchase, or any agreements inferred by employees who sale this product. Insurance or guarantees issued by our employees or employees should always be confirmed separately in writing. Any information about product adaptability and use of the product, must be verified by user prior to purchase. Check the exact consumption of product for the surface where product may be applied to determine amount of products needed. **The color matching must be verified by the user before starting work.**

## MANUFACTURER

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