



ABOUT CRYSTALAC

General Information

CrystaLac Waterborne Finishing Products are highly developed, carefully researched and formulated, premium grade acrylothane and polyurethane resins using the latest waterborne polymers. CrystaLac finishes can be used in place of nitrocellulose lacquer, polyurethane, or varnishes and applied to wood, metal, or ceramic products. They dry rapidly to form a crystal-clear, hard, durable finish. CrystaLac finishes are designed to be used right from the can and are perfect for use with high volume low pressure (HVLV) equipment. CrystaLac and Mcfeely's have teamed together to provide a full product line for your finishing needs.

Warranty

Test all products to your satisfaction on a scrap or concealed area before using. The manufacturer and McFeely's will only replace defective product. Under no circumstances will the manufacturer or McFeely's be responsible for the cost of application labor, refinishing expense, or any cost in excess of a refund of the purchase price of the product.

Product Information

All CrystaLac Finishes share the following characteristics:

- Resist water, alcohol, and most household cleansers when fully cured.
- Are formulated to be low odor.
- Can be used over fully cured oil based stains.
- Are rated for exterior use.
- Dry to the touch in 15 min; Recoat in 30 min; cures in 24 hours.
- Are ready to use from can.
- Clean up with warm water and detergents; Hardened deposits clean up with Acetone.
- Are formulated to be non-yellowing.
- Are safe for use on children's furniture and toys.
- Are non-flammable.
- Resist marring, chipping, and weathering.
- Ready to buff/polish in 72 hours.
- Possess low grain-raising properties.
- Comply with U.S. Government VOC emission codes.
- Are made in USA.

Tech Tips

- Always test on a sample before committing to an entire project.
- Never shake - gently stir product to mix settled particles. Strain if necessary.
- For a Satin or Semi-Gloss effect, build initial coats with Gloss Topcoat, then coat with Satin or Semi-Gloss to ensure transparency.
- These products contain water - water causes wood fibers to swell. Remember to use only an adequate amount of product. Excessive product (i.e. stain) will increase grain raising.
- Several thin coats are better than a few heavy coats.
- Spray in a motion away from the body to prevent excessive build up of finish.
- A dab of lip balm to the nozzle will prevent spray tip clogging.
- Do not use steel wool or steared sand paper with this product.
- Products appear opaque in the can and may appear so during application. Clear coats will dry to a crystal clear finish.
- When top coating over any white finish, it is advisable to use CrystaLac Polyurethane or Premium 2001 because of their water white (clear) properties. CrystaLac Premium 2000 has a slight amber cast, which may reduce the desired white affect.

Possible Finishing Steps When Using CrystaLac

- Prep surface to desired smoothness with sandpaper (do not use steared sand paper or steel wool).
- Dampen wood to raise grain and let dry completely.
- Re-sand with last or finer grit paper from above and remove sanding dust.
- Stain (optional) and wipe off excess with the grain.
- Paste fill (optional; usually used only for open grained woods).
- Sealer coat (optional).
- Color coat (optional).
- Clear coats (to finish or to build film for a satin or semi-gloss finish).
- Sand between coats with 200 grit or higher sandpaper or Scotch-Bright™ pad.
- Clear coat with satin/semi-gloss (optional).
- After 72 hours, wet sand with 400 grit or higher and buff (optional).

Product Properties Table - Products rated on a scale of 1 to 100

Product	Hardness	Clarity	Abrasion Resistance	Chemical Resistance
Premium 2000	80	80	80	80
Premium 2001	100	100	90	80
Polyoxide	90	90	100	100

PRODUCT LIST

CrystaLac Premium 2000 Topcoats

Our Premium Finish is a general-purpose furniture finish with a natural lacquer appearance. It boasts a light amber cast that will not yellow or crack with age. The Acrylothane™ resin system, with non-oxidizing lubricants offers exceptional flow-out and leveling properties producing a buffable finish superior to single component lacquer. Premium Finish is self-sealing, low grain raising and dries quickly. This finish is available in a sprayable or brushable formulation.

CrystaLac Premium 2000 Topcoats are an enhanced and outstanding formula of acrylothane resins. This finish exhibits a warm amber tone and resembles natural nitrocellulose lacquer in appearance.

Coverage: 125 sq ft / qt

Available in Gloss, Semi-Gloss, and Satin

CrystaLac Premium 2000 Brushable is a thicker, slower drying formulation of the original Premium 2000 that discourages the formation of air bubbles and provides better flow out properties. Apply with a synthetic bristle or foam brush or foam pad in smooth even strokes in the direction of the wood grain.

Coverage: 150 sq ft / qt

Available in Gloss, Semi-Gloss, and Satin

CrystaLac Super Premium Topcoats

Our Super Premium Finish is an exceptional resin blend that offers superb hardness, optical clarity and mar resistance. Super Premium is especially recommended for “top” surfaces, such as tables, pianos and musical instruments. Super Premium is extremely resistant to moisture and alcohol. Use on any surface that demands a hard, tough finish. Super Premium is highly resistant to scratches and the indentations of heavy objects over long periods of time. The Super Premium Finish is self-sealing, low grain raising and dries rapidly.

CrystaLac Premium 2001 is a water white (clear) finish. The harness is harder than the Premium 2000 and is ready to use right out of the can. CrystaLac Premium 2001 is recommended for use over Whitewash Stain or Universal Satin White because of its water-white properties. Use of a sealer is not required, and CrystaLac Premium 2001 may be tinted with CrystaLac Warm Dye Toner. This product is formulated for spraying only.

Coverage: 125 sq ft / qt

Available in Gloss, Semi-Gloss, and Satin

CrystaLac Polyoxide

Our Polyoxide is a floor finish designed with the same characteristics as our clear coats. Water-based, means easy clean up. Non-flammable, non-yellowing, environmentally friendly, contains a UV protectant and is fast drying. However, it's not recommended for outdoor use.

CrystaLac Polyoxide Floor Finish is the choice for a beautiful finish that is abrasion resistant. This finish is formulated for use on bar tops and gymnasium floors. Its low odor properties make it perfect for indoor application. It is non-yellowing, and it is a suitable substitute for marine spar varnish. The water white formulation may be "warmed" by adding CrystaLac Warm Dye Toner. The CrystaLac Polyoxide Floor Finish is incompatible for use over the CrystaLac Premium 2000 or 2001 finishes. This product can be applied by using a brush, or sprayed with an HVLP system.

Coverage: 150 sq ft / qt

Available in Gloss, Semi-Gloss, and Satin

CrystaLac Color Coats

Our color coats are available in white and black. The high pigment content in this product will provide excellent hide and fill properties. These coats are available as undercoats and top coats, and are formulated for spraying only.

CrystaLac Black Coats can be used as undercoats and top coats. Because of its high pigment content the Satin Black can be used as a topcoat for a satin finish, or as an undercoat or a primer. A black undercoat is currently available to be used as a primer.

Coverage: 125 sq ft / qt

Available in Satin

CrystaLac White Coats can be used as undercoats and top coats. The Universal Satin White is best used as a primer but can be used as a topcoat. Because of the pigment qualities, it doesn't have much chemical resistance. The Universal Satin White should not be used with the Premium 2000 CrystaLac, because the 2000 has a slight amber tone. The Glossy White is available as a topcoat.

Coverage: 125 sq ft / qt

Available in Glossy and Satin

CrystaLac Sanding Sealer

Sanding Sealer is a conventional sealer with outstanding first coat sanding/filling qualities with minimum grain raising.

CrystaLac Premium 2000 Sanding Sealer is not usually needed but it makes sanding easier. It is also helpful where there is a greater degree of grain raising, when using pine for instance. The sanding sealer is meant to be used with the Premium 2000 topcoats only.

Coverage: 125 sq ft / qt

Available in Gloss, Semi-Gloss, and Satin

CrystaLac Viscosity Reducer

This product is a special formulation designed to thin and enhance the flow out and leveling properties of CrystaLac coatings without altering product performance.

CrystaLac Viscosity Reducer is not for use with CrystaLac Polyoxide. It is recommended to enhance atomization with low power HVLP systems and when spraying large surface areas. Never thin CrystaLac with water.

Add 5 – 10% (by volume; 6 to 12 oz/gal) Reducer to finish if required.

CrystaLac Retarder

This additive is for our topcoats and is used to slow down the drying time of the products. It is best used in warm environments, high altitudes and/or low humidity (less than 20%). Retarder can be combined with Viscosity Reducer to achieve desired results.

CrystaLac Retarder: Add 2 – 5% (by volume; 2 to 6 oz/gal) Retarder to finish if required.

CrystaLac Surface Conditioner

If you are top coating, you must use Surface Conditioner before any finishing can be done. This product removes sanding dust, debris, oily fingerprints and other foreign matter such as furniture polishes or waxes. It also promotes inter-coat bonding over solvent-based finishes and prevents “fisheyes” caused by using steared sandpapers. Using Surface Conditioner, CrystaLac coatings (clear or color coats) may be applied over previously coated surfaces that have been finished with lacquer, urethane, shellacs, or varnishes.

CrystaLac Surface Conditioner is probably not necessary if your regular surface preparation is sound & you haven’t used steared sand paper. However, if fish eyes appear, you will need to use this product between coats. This product is not meant for use on bare wood!

CrystaLac Warm Dye Toner

This dye is a highly concentrated additive that may be added to any clear coat to achieve a warm tone effect associated with conventional lacquer, urethane, shellac, and varnish. This product is a toner and not a penetrating stain color.

CrystaLac Warm Dye Toner is used when matching a previously finished project or to enhance the warm tones of selected woods. This product is recommended to “warm up” the water white CrystaLac Super Premium 2001 and the CrystaLac Polyoxide Floor Finish.

Add 2-4 oz to 1 gallon of topcoat.

CrystaLac Wood Grain Filler

This is a non-toxic waterborne formula, which is a fast drying, easy sanding wood and pore filler for open grain woods such as oak, mahogany and walnut. Wood Grain Filler is an extremely easy product to apply and can be tinted with water or alcohol soluble dyes if necessary.

CrystaLac Wood Grain Filler is not meant to fill nail holes. You'll need to purchase wood putty for that. This product dries clear.

CrystaLac Wood Stains

Our stains are water based, and may be brushed or sprayed. They are available in quart cans. CrystaLac stains are a combination of pigments, dyes and special additives to produce a wide range of wood enhancing tones. Our different shades of stain may be intermixed or reduced with CrystaLac's Clear Base Stain to create unlimited custom colors.

CrystaLac Wood Stains are available in 9 colors and a clear stain base. These slightly thicker than water stains are incredibly easy to use and produce a deep rich luxurious uniform color without the excessive grain raising associated with other water-based stains. These stains can be applied with a brush or sprayed.

Allow 1 hour drying time before overcoating.

Available in Clear, American Maple, Black Walnut, Cherry, Darik Oak, Golden Oak, Honey Pine, Mahogany, Warm Walnut, and White Wash.

CrystaLac Spray Gun Cleaner

Our spray gun cleaner is safe to use, has a low odor, is biodegradable and is a low-flammable liquid. It has been designed to clean coating deposits from internal and external spray gun parts.

SAMPLERS

CrystaLac Sampler Kit: Includes 1 quart each of the Sanding Sealer, Viscosity Reducer, Premium 2000 Gloss, and Premium 2000 Semi-Gloss.

CrystaLac Stain Sampler: Includes 1 ounce sample of color stain, and the clear stain base that can be used to lighten any of the color stains.

PREPARATION AND APPLICATION

Wood Preparation

Use a spray bottle or slightly wet sponge to lightly wet wood. Let set for several moments then wipe dry with lint free cloth, let project sit until fully dry. This step will raise the grain of the wood improving the overall finish. By hand, lightly sand your project with 220 grit non-stearated sandpaper, removing only the 'fuzz' created by the grain raising. Vacuum thoroughly to remove all dust; DO NOT use a tack cloth.

Finishing Area and Environment

It is important to provide a clean, temperature stable, well-ventilated environment in which to apply CrystaLac finish coatings. The featured properties of CrystaLac: self leveling, rapid drying, hard cure and crystal clarity will occur best in an average temperature of 70° F, with gentle circulation of moving air. This will aid rapid surface evaporation. Extremes should be avoided. Use in an environment below 60°F or above 90°F can affect the performance of the finish coat. After the coating is dry to the touch, it will continue to cure and harden. The temperature should remain constant through this time period. DO NOT store any CrystaLac Finishing products in an environment below 60°F. Avoid freezing.

Product Application

Conventional sprayers, HVLP turbine sprayers and HVLP Conversion Guns may be used to apply clear coats and color coats, with the exception of the "brushables". When using a HVLP system, a 1mm needle (.039) will provide excellent results. If a conventional compressed air system is being used, a fine lacquer tip is suggested at a pressure of 40-45 psi. HVLP Air Conversion Spray Guns will usually atomize CrystaLac with 4.5 – 5.0 psi air cap pressure. Adjust if necessary. Since airless sprayers are not usually used for fine finishing, we suggest that you spray a test sample before committing to the job. This also applies to air assisted airless spray equipment.

It is important that the clear coat or color coat being used is stirred, not shaken, and then strained through a paper or nylon cone type filter.

Whether your project is stained or unstained your results will be most successful if you apply two light coats of the clear coat. Apply first coat, let dry, then proceed with a second coat. After the second coat is thoroughly dry, lightly sand with 320-grit non-stearated sandpaper. Vacuum well, DO NOT use a tack cloth. Next, you may apply two additional coats. As before, let each coat dry before applying additional finishing coat. The final two coats should look wet, not milky; each coat should dry level and clear. Sanding between these two coats is not necessary providing that care was taken with the preparation of your surface as well as the application of the first two coats.

When using the “brushable” finish, a good quality brush will provide the best results, although on smaller craft projects an inexpensive foam brush will be sufficient. As with the sprayable application, you must first apply two light coats of product, letting each coat dry. Lightly sand after the second coat is thoroughly dry, using 320-grit non-steared sandpaper. Vacuum well, DO NOT use a tack cloth. Next, brush on the third coat making sure to make the surface wet, not milky. Again, let this dry completely, then apply the final coat, without sanding, making the surface wet only.

It is important to remember that before you start any finishing, proper wood preparation, as noted above, will lend you the best overall results.

Cautions

Waterborne resins and additives found in CrystaLac products contain a variety of substances that react with ferrous metals, such as aluminum and certain alloys, which could cause corrosion and contamination of spray gun parts. It is important that ALL spray gun parts that come in contact with any of these fluids be Teflon coated or made of a high-grade stainless steel to afford a measure of protection. Possible reactions can be pitting of the aluminum, corrosion, rusting, discoloration and/or contamination of the coating being applied. Cup type spray guns should have a stainless steel tip, needle, and fluid passage, as well as the cup assembly parts. Aluminum cups should be Teflon coated for optimum protections and also feature stainless secondary parts. Older pressure pots were usually made from galvanized or cast iron with a fluid pick-up tube made of aluminum or steel. These older model units will react with the coating causing corrossions as well as contamination problems. If using an older type pressure pot, insert an appropriate pot liner and change the fluid pick-up tube to stainless steel or plastic, and use an epoxy paint for a suitable protective coating on the underside of the pressure pot lid. However, a new pressure pot designed for these modern coating is highly recommended. Fluid hoses should be high quality and lined. Hose couplers should be appropriate non-corrosive metals. It is our recommendation that cup type spray guns be cleaned after completion of the project. Material should not be left in the spray gun overnight. The same is recommended for pressure pot use. Remove the material from the pot and flush fluid lines at the end of each workday. If contamination or discoloration of the coating has occurred, discard the suspect material and determine the source of the problem before continuing.

Clean-Up

When cleaning spray guns, wash and rinse gun with warm water. It is sometimes possible to hold your spray gun under running water allowing the warm water to flow through the material pick-up tube, pulling back the trigger will permit the water to flow through the spray jet. This will flush out any remaining coating. If waterborne coating dries on any part of the spray equipment it will need to be softened with CrystaLac Liquid Organic Spray Gun Cleaner. This cleaner is an environmentally safe, non-flammable alternative to harmful solvents such as lacquer thinners or acetone.