



PRODUCT INFORMATION

BULLS EYE SHELLAC

WM. ZINSSER & CO., INC., 173 Belmont Drive, Somerset, NJ 08875 <http://www.zinsser.com> An RPM Company

Description

Although shellac is hundreds of years old, in performance it is as modern as today. In an age of quick-drying products, few finishes dry as fast as shellac. In an age of cleaning brushes under the faucet, shellac brushes wash to "like new" condition in all-purpose household detergents or household ammonia and warm water. In a day of do-it-yourselfers, shellac is simple and safe for householders to use. No elaborate instructions are needed, good results are almost guaranteed, and slips are easily remedied. In an age of miracle products of chemistry, for sheer beauty of film, there is still nothing to match shellac in bringing out the grain of wood and developing its tone. The finish will not yellow or darken with age like polyurethanes, and is simple to maintain.

Bulls Eye Shellacs are alcohol solutions of premium shellac, produced by processing techniques developed by Zinsser in over a century's experience. They are uniform in quality, unmatched in shelf life, and packaged for convenience of use.

Color

Dries to a transparent film. Clear Shellac has only a modest toning effect on wood. Amber Shellac is clear—i.e., not cloudy—with a decided amber cast to its film.

Finish

Medium or high gloss, depending on the number of coats applied. May be steel-wooled or rubbed with pumice and oil to a pleasing low sheen.

To Convert:

5 lb. cut to 3 lb. cut
5 lb. cut to 2 lb. cut
5 lb. cut to 1 lb. cut
4 lb. cut to 3 lb. cut

Add This Much Alcohol:

7/8 pt to 1 qt (.43 l. to 1 l.) shellac
1 qt to 1 qt (1 l. to 1 l.) shellac
2/3 gal to 1 qt (2.7 l. to 1 l.) shellac
1/2 pt to 1 qt (.25 l. to 1 l.) shellac

Why Shellac is thinner in Warm Weather

Alcohol expands under heat and also becomes a better solvent for shellac. This tends to reduce the viscosity of shellac. A 4 lb. shellac, for example, will be noticeably thinner in body on a 90°F (32°C) day than at 65°F (18°C).

This explains why in the summertime you will occasionally have a complaint that shellac is "too thin". Despite the thinner feel, however, there are just as much solids as always. The shellac will still provide the same sealing, hiding and film characteristics as it does in cooler weather.

Drying Time

Shellac sets dust-free in 10 to 15 minutes under normal drying conditions. Allow to dry 45 minutes to 1 hour before sanding.

Spreading Rate

At proper concentration for application (3 lb. cut by brush), shellac covers 600 square feet per gallon (15 sq. m. per liter)

Storage

Shellac is adversely affected by exposure to heat. Store away from steam radiators, steam pipes, and direct rays of the sun (display windows).

Effect of Extreme Heat: At high temperatures, the wax content of shellac goes into solution. (Normally it is only suspended in the alcohol, giving shellac its characteristic opaque appearance.) When it cools, the wax reverts to its normal suspended state, but in more finely divided particle size. The wax then tends to hold onto the alcohol and, as a result, the laid-down film becomes slow-drying. In extreme cases, the wax is in such a finely divided state that it will prevent the film from drying hard.

Shelf Life

Bulls Eye Shellac is made from premium raw materials and is carefully processed. Its shelf life ranges from 50 to 200% greater than that of ordinary shellacs. As a precaution, however, we stamp the can with the date of manufacture. The shellac is usable for 3 years after this date. We suggest a simple drying test before use for product older than 3 years.

Old Shellac (Test for Drying)

As it ages, shellac becomes slow-drying. If held too long, shellac reaches a point where it will not dry at all. The laid-down film remains tacky indefinitely.

What "Lb. Cut" Means

This term is used to describe the manufacturing formula followed in producing liquid shellac. It describes the pounds of dry shellac dissolved in a single gallon of alcohol solvent. To illustrate, a standard 3 lb. cut is made by dissolving three pounds of bleached shellac in a gallon of alcohol. (Because of displacement, the actual amount of dry shellac in a gallon of a 3 lb. cut is 2.3 lbs).

Thinning

Unthinned coats of 4 or 5 lb. cut shellac are too thick to penetrate and properly develop a good bond with wood. Drying is retarded and heavy film tends to scratch readily, to have poor cold check and to impair adhesion. It may even flake off when hit sharply. For most end uses, shellac should be thinned with proprietary denatured alcohol to a 3 lb. cut before application. At the 3 lb. concentration, the first coat penetrates and seals the wood; the second bonds with the first and forms a protective film that adheres tenaciously and wears well. Zinsser's ready-to-use shellac is already thinned to the 3 lb. concentration for proper application.

Thinner

Use a good grade of proprietary alcohol, one that is recommended on the label as a shellac thinner. Substitute spirit thinners often impair the film properties of shellac.

Thinning Chart

To reduce shellac, follow these thinning ratios:

4 lb. cut to 2 lb. cut	3/4 qt to 1 qt (.75 l. to 1 l.) shellac
4 lb. cut to 1 lb. cut	2 qts to 1 qt (2 l. to 1 l.) shellac
3 lb. cut to 2 lb. cut	3/4 pt to 1 qt (.37 l. to 1 l.) shellac
3 lb. cut to 1 lb. cut	3 pts to 1 qt (1.5 l. to 1 l.) shellac

Rotate Stock: Because of this aging problem, your shellac inventory should be rotated, so that you sell the oldest stock first. If you have shellac of uncertain age (or a customer comes back with a can of old shellac), test it for drying. Dip a piece of clean scrap wood into the shellac. If the shellac dries to a hard film, it can still be used even though its drying time has somewhat slowed up. The final film will wear very well.

Shellac that has reached the non-drying point should be thrown out. Thinning with alcohol will only result in applying a thinner coat of non-drying shellac.

Application Methods

May be applied by brush, roller or applicator. Generally, brush is most suitable for finishing furniture, trim, etc., while any one of the methods can be used for floors.

Brush: Use full brush, following grain of wood.

Roller: Saturate roller with shellac and remove excess on shallow, dry end of tray. Start by rolling lightly and evenly across grain of wood and finish with the grain.

Compatibility

May be applied with good results over old shellac, varnish and lacquer films. Surface must be free of wax and have worn spots sanded. (Do not use under urethane finishes.)

Surface Preparation

Surface must be clean and smooth and thoroughly dry. All traces of wax and oil must be removed with turpentine or mineral spirits. When dry, rough or worn areas should be sanded smooth and wiped clean of dust. See section on "Uses (Application Details)" for specific applications.

Uses (Application Details)

FLOORS

Gives a beautiful, long-wearing finish that is easy to maintain and won't darken or yellow with age.

Refinishing Old Floors. Sand smooth, using a floor sanding machine. Procedure: first sanding 31/2 (20) grit paper to remove old finish; 2nd sanding 11/2 (40) grit paper; final sanding 2/0 (100) grit paper. Remove all dust between sandings and after final sanding. Apply shellac (3 lb. cut) by brush or applicator, following grain of wood. Always work with full brush. Do 2 or 3 board widths at a time and avoid excessive brushing. Let first coat dry 2 hours. Hand-sand lightly with No. 2/0 sandpaper and dust. Apply second coat of shellac. (In 4 hours, second coat will be hard enough to walk on). For a fuller finish or for heavy wear areas, a third coat is recommended. Apply 3 hours after second coat and in this case allow overnight drying before subjecting to traffic.

New Floors: Sand smooth using a floor sanding machine. Procedure: 1st sanding No 1 (50) grit paper followed by 1/0 (100) grit paper for final cut. Remove all dust between sandings and after final sanding. Apply shellac as recommended under "Refinishing Old Floors" section above.

Staining Floors: If new or refinished floors are to be stained, water or quick-drying stains are preferable because they have less tendency to streak or lap, although oil stains can be used. Caution your customer to make sure stain is completely dry before applying shellac.

On pine or other soft woods, a very thin (1 lb. cut) wash coat of shellac is recommended before staining to give the wood uniform porosity throughout.

Retouching Old Floors. After adequate surface preparation (hand-sanding of worn spots and removal of old wax), shellac may be applied with good results over old shellac, varnishes and lacquers. Generally, two thin coats (3 lb. cut) will do the job. Touching up worn thresholds or other heavy-traffic areas with shellac over an old shellac finish is uniformly successful because the new blends nicely with the old finish. Shellac films don't darken with age, which means that the retouched area will not stand out.

Waxing Shellacked Floors: Allow 24 hours drying after last coat of shellac, then apply a good quality paste wax and buff. Application of wax increases water and wear resistance.

USES OTHER THAN FLOORS

Finishing Wall Paneling, Woodwork, Trim, Furniture, Cabinets.
Two coats of 3 lb. shellac give a beautiful velvety sheen. Apply shellac (3 lb. cut) by brush, applicator or pad, following grain of wood. Always work with full brush. Avoid excessive brushing. Let first coat dry 2 hours. Hand-sand lightly with No. 2/0 sandpaper; dust. Apply second coat of shellac. Allow to dry 3 hours before applying third coat, if required. A dull finish can be achieved by steel-wooling the final coat with medium or fine steel wool.

Sealing Raw or Painted Plaster Walls, Ceilings, Wallpapered surfaces, Wallboard or Dry Wall. One coat of 3 lb. cut shellac seals these porous surfaces, prevents suction, and assures a smooth finish coat of paint or enamel. Where shellac is to be used to seal dry wall before wallpapering, one coat of a 3 lb. or 4 lb. cut should be used.

Sealing Raw Wood. Where a soft wood, such as pine, is to be painted, a first coat of a 3 lb. cut shellac seals the pores of the wood, acts as a filler, and prevents the finish coat of paint from striking in and leaving the surface uneven or mottled.

Undercoat for Varnish. One coat of a 3 lb. cut shellac serves as an excellent undercoat for conventional varnishes. (Do not use under urethanes.) Shellac's quick drying shortens the finishing cycle, and reduces the quantity of varnish required. It also ensures a lighter overall finish. Shellac bonds both with the wood and with standard finishes, making a foundation for a durable finish.

Sealing Knots and Sappy Streaks. For covering knots, sap runs, etc., to prevent their bleeding into the finish coat of paint, apply one or two coats of a 3 lb. shellac.

Wash Coat Under Stains. Application of one coat of a 1 lb. cut shellac, prior to the application of a stain, assures a uniform surface and controls the penetration of the stain.
Undercoat for Wax Finish. Floors that are to have an all-wax finish should be first sealed with a coat of 3 lb. shellac before application of the wax. This prevents dirt from being ground into the wood.

French Polishing. Surface should be thoroughly sanded, stained and allowed to dry thoroughly. For this application, white shellac should be thinned to a water-like consistency . . . approximately a 1 lb. cut. Roll soft, lintless cloth into a ball, dip into the shellac and rub on the wood in rapid straight strokes, exerting only light pressure. On drying, the wood is sanded. The surface can be sprinkled lightly with very fine pumice before sanding. Apply successive coats, each one sanded smooth until a light glow begins to appear.

Packaging

	<u>4 lb.</u>	—
5 Gallons (19 liters)	Single Pail	
Gallons (3.8 liters)	Four to a Case	

At this point, add several drops of oil (boiled linseed oil or pure olive oil) to the shellac mixture and continue application, but with a rotary motion. Add more oil by degrees with subsequent coats until a deeply glowing finish is achieved. Ordinarily 8 to 12 coats will be required for this craftsman's technique.

Outside Use. Shellac is not a spar varnish. It can be used outside, however, for sealing knots. The shellac film should be then followed by conventional exterior paints for protection against the weather.

Avoiding Trouble

Removal of Non-Drying Shellac: Do not recommend the use of sandpaper because it will only gum up. Clean rags should be saturated with shellac thinner and the old finish mopped off. Rags should be changed from time to time to avoid simply redistributing the old non-drying finish.

Dark Shellac: Zinsser Shellac cans have a special lining for maximum protection against contamination. If the lining is defective and the shellac comes in contact with the black iron plate body of the container, it becomes contaminated with traces of iron and turns dark. Such shellac can still be used where color is not a problem (for instance, for sealing knots and plaster), providing it still dries satisfactorily.

If Shellac Darkens Oak Floor: Where old shellac, containing traces of iron from the container, is applied to oak flooring, the iron reacts with the tannin in the oak to form iron salts. This causes discoloration of the wood. The remedy ordinarily lies in dissolving oxalic acid crystals at a rate of 4 ounces to 1 gallon (30 grams to 1 liter) of 2 lb. cut of non-contaminated white shellac, and brushing this solution over the floor. The oxalic acid bleaches out the stain. Ordinarily one coat will cure the problem.

Bloom: If shellac is applied under conditions of high humidity, a whitening or blushing of the film sometimes occurs. Normally it disappears as the shellac dries. At extreme humidity, however, the whitening may remain in certain areas. This usually can be corrected by lightly brushing alcohol over the affected area. The alcohol releases the moisture that has been trapped in the film. This procedure should be followed as promptly as possible after the condition develops.

Maintenance of Shellac Finish

Cleaning: Shellac films may be cleaned with a damp rag or, where stubborn dirt stains are involved, mild soap and water. Wood floors should never be flooded. Water tends to get in between cracks in the wood, causing the floor to swell or buckle.

Water Spotting, Cigarette Burns, Damaged Areas. Like lacquer, shellac will spot when exposed to standing water. Ordinarily this can be cured by rubbing with an alcohol-dampened rag. Where the damage is too severe for this remedy, or where a spot is damaged from a burning cigarette, or otherwise marred, remove the old film in the affected area only, by sanding. Then apply two or more thin coats (3 lb. cut) to the area being restored. Allow to dry thoroughly. Then buff with medium or fine steel wool until the new finish blends into the old.

Cleaning Equipment

Immediately after use, remove excess shellac from brush or roller on pad of old newspaper; then soak in alcohol, in an all-purpose household cleaner (Fantastik, 409, etc.) or mild solution of household ammonia and warm water. If household cleansers or ammonia and water are used, rinse with water as with latex paints. Brush, roller or pad will be soft and clean, like new. Do not immerse in shellac again until dry.

Pertinent Government Requirements

Label conforms fully to requirements of Federal Hazardous Substances Labeling Act. Product conforms to requirements of Air Pollution Control Districts—i.e., Regulation 3, San Francisco Bay Area; Rule 66, County of Los Angeles. Product contains less than .001% lead.

Federal Specifications

Bulls Eye Liquid Shellacs meet various specifications for shellac under Federal Specs TT-V-91b., as amended.

Shellac Sticks

Shellac sticks are used for patching scratches and other wood blemishes. Shellac is applied like sealing wax, with a knife heated over a flame, then rubbed and polished. To locate a source for such sticks, write Industrial Finishing Products Inc., 465 Logan Street, Brooklyn, N.Y. 11208; Mohawk Finishing Products, Route 30 North, Amsterdam, N.Y. 12010; or Universal Shellac and Supply Co., 49 W. John St., Hicksville, N.Y. 11801.

	<u>3 lb Cuts (Ready to Use)</u>
Gallons (3.8 liters)	Four to a Case
Quarts (0.95 liters)	Six to a Case
Pints (0.47 liters)	Six to a Case
1/2 Pints (0.24 liters)	Twelve to a Case