BRISTOL FINISH UV CLEAR

HIGH PERFORMANCE EXTERIOR URETHANE COATING

TECHNICAL DATA BULLETIN

SYSTEM BENEFITS:

Bristol Finish UV Clear is a two-part polyurethane finish for exterior or interior use. UV Clear is an efficient long-lasting varnish replacement, requires less maintenance than traditional varnish, and can be reapplied in as quickly as one hour between coats. The UV Clear Resin and Catalyst are the foundation of this premium wood coating system, but several additives are available to enhance the mixture to best suit assorted environmental conditions making it easier to achieve the best results possible. Bristol Finish Traditional Amber is here to make your wood coating projects easier, less time consuming and more cost effective.

- Enhanced UV protection
- Improved abrasion resistance
- Apply over bare wood or other coatings
- 1 hr recoat time
- No sanding between coats
- Brush, roll or spray application

HANDLING PROPERTIES		Test Method
Resin Density at 25°C, lbs/gal (g/cm^3)	7.9 (0.95)	ASTM D1475
Catalyst Density at 25°C, lbs/gal (g/cm^3)	9.4 (1.13)	ASTM D1475
Mix Ratio by Weight	8A : 1B	Calculated
Mix Ratio by Volume	8A : 1B	Calculated
Mixed Density at 25°C, lbs/gal (g/cm^3)	8.07 (0.97)	ASTM D2196
Pot Life at 70°F, hrs	3 - 4	
Recoat Time at 70°F, hrs	1	
Minimum Cure Time at 70°F, hours	>24	
Full Cure Time at 70°F, days	5 - 7	
Typical Shelf Life, years	1	

PHYSICAL PROPERTIES		Test Method
Color	Clear	Visual
Finish	High Gloss	Visual
Gloss (DOI) at 20°, %	>86	ASTM D523
Gloss (DOI) at 60°, %	>92	ASTM D523
Gloss (DOI) at 85°, %	>97	ASTM D523
Color Change, 2,000 hrs QUV, ΔE^*	2.68	ASTM G154 Cycle 1
Flash Point, °F	102	Closed Cup
Solids Content, % by Weight	43	
VOC Content, as supplied, g/L	482.4	

Figure 1. Depiction of weathering time-lapse for Bristol Finish UV Clear



APPLICATION GUIDELINES

Application Temp, °F	45 - 100	
Application Humidity, %	0 – 99	
Number of Coats, Bare Wood	6 minimum	
Number of Coats, Existing Varnish	6 minimum	
Recoat Time at 70°F, hrs	1	Longer in cooler conditions
Thinning, % by Vol	10 – 15	Acetone or Bristol Thinner
Application Method, Brush	Yes	
Application Method, Roller	Yes	
Application Method, Conventional Air Spray	Yes	Professionals only
Application Method, HVLP Air Spray	Yes	Professionals only
Coverage per Quart, 6 Coats, ft^2 (m^2)	35 (3.25)	Practical
Coverage per Gallon, 6 Coats, ft^2 (m^2)	130 (12)	Practical

PRINCIPALS OF COATING:

The application of Bristol Finish requires the same basic preparation steps as any conventional varnish or paint product. The old saying is completely true - proper preparation and application accounts for 90% of the final appearance and performance.

- Getting a beautiful long lasting finished project is not rocket science, but it does take some work and attention.
- Any professional finisher will tell you that the prep before application is the most important part of the process.
- Moisture before you apply, during application, and after you are finished is the greatest challenge facing any wood coating.

Carefully read and understand all application instructions before use. Additional articles and expert advice on preparation, refinishing techniques and troubleshooting can be found at www.bristolfinish.com

WORKING CONDITIONS

TEMPERTAURE AND HUMIDITY:

Bristol Finish can be applied in full sun or shade in temperatures from 45° to 100°F (7° to 38°C) and relative humidity of 0% to 99%. Lower temperatures cause longer dry and cure times. Higher temperatures cause more rapid drying. Neither have any effect on appearance, durability or performance. Windy conditions, wet or damp wood and applying cool material on a hot surface may cause bubbles. Allow a minimum of 4 hours after application before any dew forms to avoid a dull appearance. Protect material from freezing.

COMPATIBILITY:

Surfaces to be coated must be clean dry and smooth. Bristol Finish may be applied on bare wood, epoxy-saturated wood, over wood stains, sealers and over existing varnish or Cetol if in good condition. Teak oil must be completely removed using commercial teak cleaner. Check compatibility with existing coatings and stains on a small area before coating large areas.

POT LIFE:

The working time of the catalyzed mixture is approximately 3-4 hours at 70°F (21°C), or shorter in warmer conditions. When not in use, cover the working mixture container and store in the shade or a cool location.

CURE TIMES:

Allow a minimum of 24 hours before normal use when temperatures are above 70° F (21°C). More time (approx. 36 - 48 hours) will be required in colder temperatures, or when working indoors with inadequate air movement.

EQUIPMENT

MIXING AND APPLICATION:

Mixing and application equipment must be clean to avoid contamination. Use good quality natural bristle or high quality foam brushes. For roller application, use urethane rated roller covers. Do not use brushes that have been used to apply other coatings, or that have been soaked in mineral spirits. Do not use stirring sticks that have been used in other coatings or paint. For measuring use a disposable plastic paint mixing cup. Mixing containers may be plastic, glass or metal. Do not use plastic drink cups or waxed containers.

CLEAN UP:

Use acetone, lacquer thinner or Bristol Finish Thinner for cleanup. Clean up spills immediately. If spills are cured, use paint remover. Remove Bristol Finish from skin using commercial hand cleaner.

SURFACE PREP

FILLING, CAULKING, TAPING:

All joints, gaps, cracks and splits must be fully sealed (glued or caulked) to prevent moisture intrusion and lifting of the coating. Clean joints and caulk as required with 3M 5200. When applying tape, back the tape away from any joint by 1/32” or so to ensure that no wood is left bare.

NEW OR BARE WOOD:

For teak, use a commercial teak cleaner to remove excess oil, stains or discoloration. For other wood types, use a mild wood cleaner. Follow manufacturer’s instructions and rinse thoroughly. Allow the wood to dry for a minimum of 24 hours. Sand until completely smooth (80 grit, 150 grit, 220 grit). Remove dust and scrub down with acetone, saturating the wood liberally, using a clean cloth. Do not use mineral spirits or paint thinner. Lightly wipe with a clean rag to remove any remaining dust.

PREVIOUSLY FINISHED SURFACES:

New coatings should be allowed to fully cure to prevent the solvents in Bristol Finish from lifting the underlying finish. Wash to remove dirt and salt. Rinse thoroughly and dry. Oil finishes must be removed. If existing coating is unsound, peeling, cracked or crazed, it must be removed. Sand with 220 grit to remove gloss and surface defects until uniformly smooth and dull. Use a red ScotchBrite® pad for sharp corners and edges. Remove dust, then lightly wipe with a clean rag and acetone. Check compatibility on a small test area before coating large areas.

APPLICATION

MEASURING AND MIXING:

Mix 8:1 by volume with Catalyst, 8 Parts by UV Clear Resin (Part A) to 1 part by Catalyst (Part B). DO NOT vary mix ratio for any reason. Mix slowly until uniform. Avoid excess air entrapment. Mix small batches to avoid waste. Careful measuring and thorough stirring are required. Wipe the Catalyst container spout THROUGHLY after pouring to prevent sticking. Close container IMMEDIATLEY after pouring. Catalyst has a shelf life, variable once opened.

THINNING:

The viscosity should be suitable for brush, roller or spray application. If thinning is desired, use acetone or Bristol Finish Thinner. Use one (1) part by volume or less. In extremely hot weather (90°F/32°C) use Bristol Finish Tropical Reducer to slow the dry time if required.

BRUSH APPLICATION:

DO NOT over-brush. Lay the coating on with ONE slow stroke, brushing back in the direction of the wet edge. Dip brush ¼" deep, and DO NOT wipe on the rim of the pot. Use the largest brush that will fit the work.

ROLLER APPLICATION:

For roller application (large areas), quickly spread the coating on a 2' x 2' or so area, and quickly stroke once with a slightly wet brush. This technique will require practice (or 2 persons) if you are not an experienced painter.

SPAY APPLICATION:

Only qualified professional operators that are familiar with 2-part coating systems should perform spraying. Use conventional pressure or HVLP equipment, and settings that are comparable with other 2-part urethane products. Adjust for personal preference.

COATING:

6 coats required minimum over existing varnish. 6 coats required minimum over bare wood. More coats may be required to completely fill the wood grain to ensure that there are no thin spots on the surface. More coats (up to 8) will be required for severe tropical exposure. More coats may be applied if desired for a deeper, "wet look" finish. There are three methods to choose from for application.

WET-ON-WET METHOD:

Apply the first coat and allow to dry to a firm tack (approximately 1-2 hours). Apply the second or next coat without sanding. Continue in this fashion until all coats are applied. When re-coating within short intervals, use light pressure on the brush to avoid brush marks. Use just enough brush pressure to spread the fresh coat out. Re-coat without sanding at any time up to 24 hours after the last coat was applied.

DRY METHOD:

Apply a coat, allow to dry completely, sand and repeat. Note that when sanding between coats, potentially you must apply 8 coats to end up with 4 coats on the surface.

PRACTICAL METHOD:

Apply all but the last coat using the wet-on-wet method as described above. Don't stop because of runs or small amounts of dust. Allow to cure (24-36 hours) and sand with 220 grit until the surface is smooth and uniformly dull. Use a red ScotchBrite® pad on sharp corners or edges. Remove dust and wipe with a clean rag and acetone or lacquer thinner. Apply the final coat. This method gives a fast build-up and the chance to remove defects with a minimum of labor.

SATIN OR MATTE FINISH:

If a satin or non-gloss finish is desired, either apply a final coat mixed with our Satin Additive, or rub down to the desired appearance level using pumice, ScotchBrite® pads or fine sandpaper.

MAINTENANCE

COATING:

In tropical latitudes, apply a maintenance coat once after 12 months. In southern latitudes, re- coat once after 18 to 24 months. In northern latitudes, re-coat once after 36 to 48 months. This will keep the finish looking new and renew the UV resistance.

SURFACE PREP:

Wash to remove dirt and salt. Rinse thoroughly and dry. Sand by hand using 220 grit until uniformly smooth and dull. Use a red ScotchBrite® pad for sharp corners and edges. Remove dust then lightly wipe with a clean rag and acetone. Apply a minimum of 1 coat and make sure there are no thin or missed areas.

DAMAGE REPAIR:

More coats must be applied when repairing any damage. Build any bare spots up to the same thickness as the surrounding area. Sand the edges of repairs smooth and scuff sand the entire piece to a stopping point. Apply the maintenance coat over the entire piece.

Polytek Development Corp has experience only in the compounding of resins and hardeners and not in the actual manufacture of tools or parts. Each piece is different. The user should run tests to assure the suitability of the system for use in a particular application. The test data and results set forth herein are based on laboratory work and do not necessarily indicate the results that the buyer or user will attain.

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