

General General Généralités

<http://www.woodkote.com>

1.1 General Requirements

- 1.1.1 Division One, General Requirements is part of this Section and shall apply as if repeated here.

1.2 Additional Reference

- 1.2.1 Wood Finishing Student Workbook, National Painting Decorating and Drywall Apprenticeship and Manpower Training Fund, 1989
- 1.2.2 Understanding Wood Finishing, Bob Flexner, Rodale Press, 1993

1.3 Submittals

- 1.3.1 Samples: For each system indicated on the attached Schedule of Finish Systems, provide two (2) 8.5" X 11" pieces of each specie finished as specified below for approval by <Architect | Specifier>. If it is apparent conditions may allow substantial variations yet conform to these specifications, a sufficient number of 8.5" X 11" samples shall be created to indicate the parameters of the variations. Those samples marked "approved" by <Architect | Specifier> shall serve as the standard for similar work throughout the project.
- 1.3.2 List of Materials: All the materials specified on the attached schedule shall be manufactured by Wood Kote Products, Inc ("Wood Kote") or by manufacturers whose specific product(s) is (are) approved for use by Wood Kote in the finishing cycle. All materials shall be purchased in their original containers from an authorized Wood Kote dealer. Containers shall not be opened except for tinting, creating samples or application.
- 1.3.3 Extra Materials: At the completion of work, for future maintenance, the project owner shall be supplied with any partially full containers of stains, fillers and transparent coatings that remain. These containers shall be tightly sealed and their contents clearly identified. Such materials shall be taken to the <designated storage area>.

1.4 Product Delivery, Storage and Handling

1.4.1 Storage and Safety Precautions: Store containers of stain, grain filler, lacquer, polyurethane, thinners and other volatile materials in a well-ventilated designated room under lock and key, where they will not be exposed to excessive heat or direct rays of the sun. Keep containers tightly closed when not in actual use. Remove used cloths from building every night, and when not in use. Take precautions against spontaneous combustion by drenching used cloths in water or placing in airtight covered metal containers. Provide a carbon dioxide CO₂ fire extinguisher of a proper capacity in this room while area is used for paint storage. Store wood bleach (an oxidant) in a separate designated room under lock and key and away from volatile materials.

1.4.2 Protection: Protect the work of other trades from damage. Post signs at freshly-stained or varnished surfaces immediately following their completion. Any soiling of finished flooring attributable to this section due to spillage, mixing of material, or any other cause whatsoever, to be entirely reinstated under this Section at no expense to the Owner.

1.5 Job Conditions

1.5.1 Environmental Conditions and Temperatures: Do not apply transparent finishes in a dusty atmosphere. At all times, sufficient ventilation must be provided to keep exposure below the levels indicated on the Material Safety Data Sheets provided by the manufacturers.

1.5.2 Recommended procedures and dry times are based on application at sea level, at temperatures between 68-72°F (20-22°C) at 40-50% relative humidity. Allowances in the recommended dry times must be made for disparities in elevation, temperature and humidity. In no case should stains or lacquer be applied outside the temperature range 40-85°F (5-30°C). In no case should polyurethane be applied outside the temperature range 50-85°F (10-30°C).

- **Specifications available in MANUSPEC® format at:**
- **Especificaciones disponibles en versión MANUSPEC® en:**
- **Spécifications disponibles en version MANUSPEC^{MD} de:**

<http://www.woodkote.com>

- 1.5.3 Protection
- .1 Provide metal pans or adequate tarpaulins to protect floors in areas assigned for the storage and mixing of bleach, stains, transparent finishes and thinners.
 - .2 Use sufficient drop cloths and protective coverings for the full protection of floors, furnishings, and other work not being finished. Protect mechanical, electrical, and special equipment hardware, as well as all other components of the building which do not require finishing from spotting and other soiling during the processes.
 - .3 Leave above areas clean and free from evidence of occupancy upon completion of painting.
 - .4 Protect solvent-based materials from fire and water-based materials from freezing.
 - .5 Keep waste rags submersed in water in metal drums and remove from building at end of each working shift.
- 1.5.4 Lighting: Provide a minimum of 75 foot-candles (161 lux) lighting on surfaces to be finished.
- 1.5.5 Spray application: In occupied buildings do not spray solvent-based materials during business hours (7:00 a.m. to 6:00 p.m.). Give Owner 48 hours notice in writing before application work begins. Cease operations a minimum of 3 hours before business day begins.

Products

Productos

Les Produits

2.1 Materials

2.1.1 Chemical Strippers:

.1 “NMP” (N-Methyl-2-Pyrrolidone) Stripper: Organic Strip™, Bio-Wash Products, Delta BC, Canada. Other strippers containing no Methylene Chloride may be used but must be tested first to assure product compatibility.

.2 Methylene Chloride Stripper: Jasco Premium Paint & Epoxy Remover, Jasco Chemical Corp, Mountain View CA, USA.

2.1.2 Wood Bleach: LITE-N-UP™, Wood Kote Products, Inc, Portland OR, USA. Bleaching system consists of Hydrogen Peroxide & Sodium Hydroxide components.

2.1.3 Wood Filler:

.1 Solvent-based Wood Filler: Famowood Professional Wood Filler, Eclectic Products, Inc, Springfield OR, USA.

.2 Water-based Wood Filler: Famowood Solvent-free Wood Filler, Eclectic Products, Inc, Springfield OR, USA.

2.1.4 Stainable Primer: TRANS KOTE®, Wood Kote Products, Inc, Portland OR, USA. Pigmented lacquer, light beige (wood) color.

2.1.5 Sealers:

.1 Brushable Lacquer: W-K-I-B, Wood Kote Products, Inc, Portland OR, USA.

.2 Sprayable Lacquer: W-K-I-S, Wood Kote Products, Inc, Portland OR, USA.

.3 Sanding Sealer: S-40, Wood Kote Products, Inc, Portland OR, USA.

2.1.6 Stain: Jel'd Stain™, Wood Kote Products, Inc, Portland OR, USA. Gelatinous semi-transparent wood stain.

.1 Factory colors Nos. 201 – 224 or 227: Formulated with dry pigments and/or solvent-based colorants.

.2 Factory colors Nos. 201 – 224, 226 (Natural) & 227: Custom tinted with glycol, solvent or linseed oil-based colorants as per specifier's formula.

- 2.1.7 Grain Filler: WoodPerfect™, Wood Kote Products, Inc, Portland OR, USA.
 - .1 Factory colors Nos. 700 – 705: Natural or formulated with dry pigments.
 - .2 Factory colors Nos. 700 – 705: Tinted with glycol, solvent or linseed oil- based colorants as per specifier's formula.

- 2.1.8 Tints and colorants: Products deemed compatible with the above Wood Stain and Grain Filler:
 - .1 Solvent-based colorants: 844- , Wood Kote Products, Inc, Portland OR, USA.
 - .2 Glycol-based colorants: Colortrend®, CreaNova (Hüls), Piscataway NY, USA.
 - .3 Linseed oil-based colorants: Tints-all®, Sheffield Bronze Inc, Toronto ON, CANADA.

- 2.1.9 Nitrocellulose-based Lacquer: Wood Kote Products, Inc, Portland OR, USA.
 - .1 Brush application: Crystal Kote Lacquer™ or Wood Kote W-K-I-B, both available only in Satin finish.
 - .2 Spray application: Wood Kote C-427 Lacquer, available in Gloss, Satin or Flat; or Wood Kote W-K-I-S Lacquer, available in Satin finish only.

- 2.1.10 Water-based Polyurethane: Cascade Poly Kote™, Wood Kote Products, Inc, Portland OR, USA, for brush or spray application available in Gloss or Satin.
- 2.1.11 Solvent-based Polyurethane: Ultra Poly Kote™, Wood Kote Products, Inc, Portland OR, USA, for brush or spray application available in Gloss, Satin or Matte.
- 2.1.12 Solvent-based Polyurethane: Jel'd Poly Kote™, Wood Kote Products, Inc, Portland OR, USA, for wipe-on application available only in Satin.
- 2.1.13 Exterior Solvent-based Polyurethane: Flagship® UV, Wood Kote Products, Inc, Portland OR, USA, for brush or spray application available in Gloss or Satin.
- 2.1.14 Solvent for dilution and clean-up: Poly Solvent (mineral spirits) and T-4 Lacquer Thinner, Wood Kote Products Inc, Portland OR, USA.
- 2.1.15 Wood Polish: Sta-Wax®, Wood Kote Products Inc, Portland OR, USA.

Execution

Ejecución

Exécution

3.1 Inspection

- 3.1.1 Verify all surfaces to be finished will be maintained within a temperature range of 68 - 72°F (20-22°C). Do not proceed if, at anytime during the application and curing process, surface temperatures will fall below 40°F (10°C) or above 85°F (30°C) without written permission from <Architect | Specifier>.
- 3.1.2 Verify all surfaces to be finished are clean and dry. Use an electric moisture meter to test all wood surfaces. Do not proceed if reading is higher than 15% without written permission from <Architect | Specifier>.
- 3.1.3 Verify that equipment is available to remove all dust from the areas before transparent finishes are to be applied.
- 3.1.4 Verify that work schedules with other trades will allow a relative dust-free environment in the areas where transparent finishes are applied and will remain dust free until at least dry to the touch.
- 3.1.5 If possible, wood and non-wood surfaces that are to be finished with a transparent coating (varnished) should be completed before general painting is to begin. [Paint splatters while still wet can easily be wiped off varnished surfaces.]

3.2 Preparation

- 3.2.1 Hardware: Remove any finish hardware, hinges, latches, switch plates, accessories, grilles, etc. that are not to be finished. Mask any hardware that is not removable. Re-install the hardware when the wood finishes are complete and thoroughly dry.
- 3.2.2 Countersinking & Filling
- .1 As necessary, countersink any nails or screws to a level that will not be less than 1/16" (1.6mm) below the final sanded surface.

.2 Using a specified Wood Filler and a putty knife, fill all gaps, cracks and areas where wood is missing. Nail and screw holes less than 1/8" (3.2mm) in diameter should be left unfilled at this time.

3.2.3 Sanding

- .1 Sand all wood surfaces in the direction of the wood grain with the appropriate abrasive grit specified on the attached schedules.
- .2 Sand all wood surfaces until all machine marks and glue are removed and each specie has achieved a uniform smoothness without rough or burnished areas. An ultraviolet or "black light" may be used to detect any residual glue to be removed. If uniformity is in question, shine a 100w shop light across and parallel to the surface to detect irregularities.
- .3 Remove all sanding dust from the surfaces to be finished and from the work area.

3.3 Workmanship

- 3.3.1 All work shall be performed by skilled tradesmen under the direction of a capable foreman.
- 3.3.2 All work shall be performed in a workmanlike manner with suitable equipment in good condition and in an environment for the production of best results. Final finishes must be uniform in sheen and color, must be free from brush marks, sags, runs, bubbles or other defects detrimental to appearance or performance.
- 3.3.3 It is generally intended that materials will be applied by brush or cloth. Spray painting will be allowed only where advantageous and only with written permission from <Architect | Specifier>.
- 3.3.4 The final application of transparent finish is to be applied only after all surfaces have been inspected and approved by <Architect | Specifier>.

3.3.5 All material shall be applied first, in accordance with current local, state and federal regulations; second, according to the attached schedules; and next according to manufacturers' recommendations.

3.4 Application

3.4.1 Bleaching: If any bleaching is specified on the attached schedules, proceed as follows:

- .1 In a plastic container carefully mix components of the Wood Bleach in the proportions specified. Mix only an amount that will be required within the subsequent eight (8) hour period. Dispose of any unused solution according to local regulations.
- .2 Use a clean nylon or bristle brush to evenly apply the Wood Bleach solution to the wood surfaces always keeping a wet edge. On vertical surfaces, apply starting from the bottom to avoid "run marks." Apply only an amount that will just saturate the wood. Do not allow the solution to puddle on horizontal surfaces or flow downward on vertical surfaces.
- .3 If more than one application of solution is specified or required, allow the wood surfaces to achieve a uniformly dry appearance before applying subsequent applications.
- .4 Allow the bleached wood to dry completely before applying any subsequent compounds or materials to it. Under ideal conditions, this will require at least twenty-four (24) hours and perhaps several days in cool or humid conditions. Use a moisture meter to determine if the wood surface has returned to its prior moisture content.
- .5 Re-sand the bleached wood surfaces with the same specified grit to obtain a uniform surface.

3.4.2 Priming and Sealing: If any surfaces are to be primed or sealed as specified on the attached schedules, proceed as follows:

- .1 Apply any specified sealer or stain controller by brush. Apply by spray only with written permission from <Architect | Specifier>. Apply only enough to cover the surface. Do not apply an amount that will puddle or run.
- .2 Apply a specified stainable primer to non-wood and paint-grade wood surfaces with a high-quality natural bristle brush. Apply by spray only with written permission from <Architect | Specifier>. Apply only enough to just cover the surface and hide finger joints and blemishes. If applying by spray, fog the surfaces from at least 3 feet (1m) to achieve a uniform roughness to the primer.

3.4.3 Staining

- .1 Flat surfaces: Apply specified gelatinous wood stain by hand to flat bare wood or flat primed surfaces in the following manner: Apply undiluted gelatinous wood stain with a clean lint-free cloth directly from the factory container. Apply the stain first to the cloth and then to the wood using a circular motion covering no more than 3 or 4 square feet (1m²) at a time. Rub the stain until it is evenly distributed across the immediate work area. Next, wipe excess stain with the cloth in the direction of the wood grain. Repeat the process until the entire area to be stained is completely and evenly covered. Use even pressure when wiping the excess stain in the direction of the grain to maintain uniform color. Allow the stain to dry.
- .2 Raised panel surfaces: Apply specified gelatinous wood stain by hand to raised paneling and panel doors surfaces in the following manner: Apply un-thinned gelatinous wood stain with a clean lint-free cloth directly from the factory container. Apply the stain first to the cloth and then to one entire panel area using first a circular motion, then wipe stain along the surrounding panel edges. Wipe the excess stain in the direction of the panel grain until it is evenly distributed in the panel and edged. Next, use a dry bristle brush to remove any stain that may have accumulated in the panel corners. Then run the brush along the panel edges. Complete

each panel, one at a time, in the above manner until all panels are complete. Next, wipe stain as in the section above onto the horizontal rails. Then, apply to the vertical stiles. Allow the stain to dry.

- .3 Molding, trim and casework: Apply specified gelatinous wood stain by hand using a clean, lint-free cloth. Use a dry bristle brush to apply stain into tight areas such as corners or grooves. Also use a dry bristle brush to remove any excess stain caught in these areas.

- .4 Large areas: Only with written permission from <Architect | Specifier> should alternative stain application methods be used. A lambs-wool pad may be used to apply stain to large and/or difficult-to-reach surfaces. Solvent-based gelatinous wood stain can be diluted with mineral spirits for spray application. In most cases, spray application will require wiping in the direction of the grain with a cloth immediately after application. Care must be taken to wipe away only an amount of diluted stain such that the remaining stain achieves the originally specified color.

3.4.4 Grain filling

- .1 Unstained bare wood: If grain filling is specified in the attached schedules, it should be applied in the following manner: Using a flexible plastic applicator, wipe the filler in two directions diagonally across the grain of the wood forcing the compound into the wood pores. Use the flexible plastic applicator to remove as much of the filler as possible that is on the wood surface being careful not to apply so much pressure as to pull the filler from the grain. After the filler has begun to set (when the treated wood surface appears dull-flat) but before the grain filler has begun to harden (when it becomes gum-like), a course cloth should be rubbed across the wood grain until all excess filler on the surface is removed.

.2 On stained wood: After it is determined that the previously applied stain is dry enough that it will not be lifted by the grain filler, it should be applied as in the section above. The grain filler on the wood surface must be removed only with a course cloth as above. Do not use an abrasive because it will remove the stain. Do not apply stain after the application of grain filler. Grain filler will partially seal the wood surface affecting the color and adhesion of the stain.

3.4.5 Transparent finishes: The application of transparent finishes specified shall be done in the manner, method and in the amounts listed on the attached schedules. In addition, the following precautions and steps shall be followed:

.1 Application of lacquer over lacquer-based stainable primer: If a lacquer finish is specified on a surface that holds an application of lacquer-based stainable primer and an application of stain, the first application of clear lacquer shall be a very light spray "mist-coat" to be applied to the surface from a distance of no less than 3 feet (1m). Such application shall be done in a manner to prevent the subject application and subsequent applications of lacquer, by spray or brush, from lifting the stainable primer through the stain application.

.2 Application of lacquer over previously applied polyurethane: Lacquer solvents will destroy the integrity of polyurethane applications and thus, such application, by accident or design, shall not take place.

.3 Application of water-based polyurethane over bleached wood: Water-based polyurethane can become discolored if applied to a previously bleached wood surface that has residual chemical action. Therefore, water-based polyurethane shall be applied to bleached wood only after it is determined that the wood is thoroughly neutralized and in no case will this be less than 72 hours after the final application of bleach.

- .4 Application of water-based polyurethane over solvent-based products: Compatibility problems can arise if water-based polyurethane is applied over solvent-based stain that is not thoroughly dry. Therefore, water-based polyurethane shall be applied over solvent-based stain only after it is determined that the stain is thoroughly dry and in no case will this be less than 72 hours after the final application of stain
- .5 Application of wipe-on polyurethane over stain: Solvents in wipe-on polyurethane can lift stain from the wood surface if the stain is not thoroughly dry. Therefore, wipe-on polyurethane shall be applied over solvent-based stain only after it is determined that the stain is thoroughly dry and in no case will this be less than 24 hours after the final application of stain.
- .6 Application of exterior polyurethane on exterior doors: Exterior wood doors can absorb moisture if all the surfaces, especially the top and bottom edges are not completely sealed. Therefore, all wood doors leading to exterior areas that are specified to be finished shall be removed from the hinges, placed horizontally and no less than 3 applications of exterior grade polyurethane containing UV inhibitors shall be applied to all unpainted surfaces.
- 3.4.6 Final filling and touch-up: After the first application of a transparent finish and before subsequent applications, all nail and screw holes and any other minor blemishes shall be completely filled with a rub-in putty that matches the color of the surrounding wood. Any excess putty shall be removed from the surrounding surface with a clean lint-free cloth before subsequent applications of transparent finish.
- 3.4.7 Final cleaning and polishing: At the last possible opportunity before the completed project reverts to the Owner, all the finished wood surfaces shall be wiped and cleaned with a minimum amount of paraffinic oil-based polish containing a cleaning agent.
- 3.5 Finish Systems**
- 3.5.1 See attached