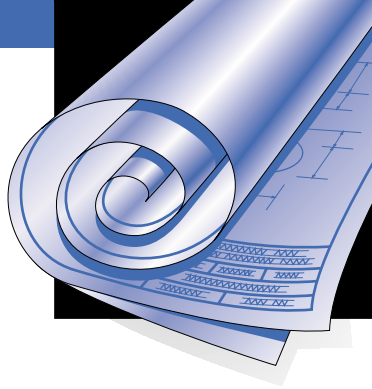

Finishing APA Rated Siding for Protection and Appearance

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Introduction

For best performance and appearance, *APA – The Engineered Wood Association* (APA) Rated Siding must be properly finished. The primary functions of a finish are to protect the siding from the weather and to enhance its appearance. To select the best finish for a particular application, weigh the aesthetic considerations against durability and maintenance requirements.

Some finishes, such as semitransparent stains, accent the natural beauty of wood. These types of finishes, however, generally require frequent maintenance. Other finishes, such as acrylic latex house paints, are less natural in appearance but typically offer superior durability.

Another consideration is the type of siding to be finished and its surface characteristics. Sidings that contain numerous surface repairs, for instance, are inappropriate under semitransparent stains. The following discussion reviews surface characteristics of APA Rated Sidings and APA recommendations for suitable finish types.

APA Rated Sidings include plywood 303 Siding and overlaid oriented strand board (OSB) products. All of these products are available as either lap or panel siding. Most OSB sidings are manufactured from oriented wood strands and overlaid with a resin-treated paper. However, some plywood panels are available with a hardboard face.

Three types of finish are recommended for exterior use on APA Rated Siding, depending on the panel type, face grade, and surface characteristics. They are oil-based semitransparent stains, solid-color stains and two-coat acrylic latex house paints. Semitransparent stains allow the natural wood surface characteristics to show through the finish. Solid-color stains and house paints mask color differences on the wood surface and tend to obscure any repairs. Therefore, face grade, surface characteristics and finish should be selected to meet the desired appearance and maintenance requirements.

The following recommendations are generic guidelines and may not apply to all APA Rated Sidings. For specific recommendations, check with the siding manufacturer and local paint suppliers or manufacturers.

APA 303 Siding Face Grades

Most plywood APA Rated Siding is produced in accordance with APA's 303 Siding Manufacturing Specifications. Since 303 Siding is available in 13 different face grades, a brief summary of the grading requirements may be helpful.* Plywood 303 Sidings are grouped into four appearance classifications that are primarily differentiated by the number, size and type of repairs. The four classifications are Special Series 303, 303-6, 303-18 and 303-30. Each of these classifications is subdivided according to face grade as shown in the table on the following page.

Special Series 303 is somewhat different from the other classifications. It includes 303-OC which allows no repairs other than small color-matched wood shims. 303-OL is plywood overlaid with a resin-impregnated paper. It is available in both smooth and textured surfaces and provides a stable, check-free surface with excellent finishability. 303-NR is available where a more rustic appearance is desired, allowing knots and knotholes in the face veneer (patches are not permitted). 303-SR is similar to 303-NR but allows synthetic repairs in the shape of natural surface characteristics such as knotholes.

*For a complete description, see 303 Siding Manufacturing Specifications, Form No. B840.

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The other three classifications are graded according to the number of repairs and the type of repair (wood or synthetic). The number immediately following the 303 designation limits the quantity of repairs allowed in that face grade (6, 18 or 30). The letter(s) at the end will be either W for all wood, S for all synthetic or S/W which may include both wood and synthetic repairs. An example face grade, 303-6-W, allows six patches, all of which must be made from wood.

In general, the latter three classifications do not require the manufacturer to color-match the repairs. A light patch might appear in a darker area of the face veneer or vice versa. The one exception is 303-6-W, which requires the manufacturer to color-match all wood patches and shims, and is also more restrictive on the size of the repairs. The grade of the face veneer should be carefully considered when selecting a finish to be applied to 303 Siding.

Finishes

All APA Rated Siding used outdoors should be finished. Modern finishes are available in a wide array of colors that help to enhance the architectural appeal of wood sidings and provide protection from the degrading elements of the weather. The service life of finishes may vary significantly depending on finish quality, finish application, siding characteristics and exposure conditions. However, some general statements can be made as to the relative durability of finish types. The aesthetic considerations as well as the merits of each of the three finish types recommended over APA Rated Siding are discussed in the following sections.

Semitransparent Stains

When using semitransparent stains, only oil-based formulations are recommended. Oil-based semitransparent stains accent the natural beauty of wood by allowing the grain and texture to show. They are also available in shades that simulate the natural colors of various wood species. Of the three finish types, semitransparent stains provide the least amount of protection to wood sidings and are initially a high-maintenance finish. On the other hand, they require only minimal surface preparation prior to refinishing. Consequently, this type of finish is reasonably easy to maintain. As refinishing becomes necessary, subsequent coats of finish tend to last longer and provide greater protection to the siding surface due to increased finish penetration after the siding has been exposed to weathering.

Although semitransparent stains tend to even out minor color variations in wood, they will not provide a uniform color where gross differences exist. Neither do they perform well over synthetic repairs. Therefore, semitransparent stains are only recommended on plywood face grades stamped 303-OC, 303-NR and 303-6-W. Semitransparent stains should not be used on other 303 face grades unless specifically recommended by the panel manufacturer. (Semitransparent stains are not recommended for use on overlaid plywood or OSB, or plywood with a hardboard face.) Check with the siding manufacturer for specific recommendations.

Semitransparent stains should not be reapplied too often, or a continuous film may develop causing the finish to become more opaque and approach the appearance of a solid-color stain. One indication that it is time to refinish is when bare wood becomes evident. It is frequently unnecessary to refinish the entire house at the same time since finish deterioration generally occurs more rapidly on those sides receiving the most weather, usually the south and west sides. Always follow the finish manufacturer's recommendations.

303 SIDING FACE GRADES

Class	Grade*	Patches	
		Wood	Synthetic
Special Series 303	303-OC (Clear) 303-OL (Overlaid, e.g., MDO Siding)	Not Permitted Not Applicable for Overlays	Not Permitted
	303-NR (Natural Rustic) 303-SR (Synthetic Rustic)	Not Permitted Not Permitted	Not Permitted Permitted as Natural-Defect Shape Only
303-6	303-6-W 303-6-S 303-6-S/W	Limit 6 Not Permitted Limit 6 – Any Combination	Not Permitted Limit 6
303-18	303-18-W 303-18-S 303-18-S/W	Limit 18 Not Permitted Limit 18 – Any Combination	Not Permitted Limit 18
303-30	303-30-W 303-30-S 303-30-S/W	Limit 30 Not Permitted Limit 30 – Any Combination	Not Permitted Limit 30

*W-wood patch, S-synthetic patch, S/W-both wood and synthetic patches, number indicates maximum number of patches allowed.

Solid-Color Stains

Solid-color stains are more highly pigmented than semitransparent stains and are essentially a thin coat of paint. They are usually self-priming and are often applied in one coat. They hide the wood grain and color and tend to obscure surface repairs in the siding, but still allow the surface texture to show. They generally are more durable and provide greater protection to the wood than semitransparent stains. A compatible stain-blocking primer should be applied to new wood if light-colored latex stains are to be used. This helps to protect the finish from water soluble extractives present in most wood species. Solid-color stains often require more extensive surface preparation than semitransparent stains when refinishing becomes necessary. This is because they form a continuous film which can flake or peel. Solid-color stains may be used over most APA Rated Sidings, although oil-based formulations are not recommended over grades 303-NR or 303-SR. Some manufacturers recommend only latex formulations when solid-color stains are used on overlaid sidings.

House Paints

The most protective and durable finish to use on 303 Siding is a top-quality all-acrylic latex house paint composed of a stain-blocking acrylic latex primer and at least one all-acrylic latex topcoat. Two topcoats will significantly extend the life of the finish. Because acrylic latex house paints remain flexible as they age, they are able to withstand dimensional changes in wood better than other conventional finishes. They also tend to hide the surface characteristics and obscure the surface texture of sidings more than solid-color stains, but generally offer superior durability. Like solid-color stains, house paints are film-forming and require more extensive surface preparation than semitransparent stains, if flaking or peeling has occurred prior to refinishing. Flaking failures can be minimized by refinishing when the first signs of adhesion failure become evident. Acrylic latex house paints may be used over all APA Rated Sidings.

Edge Sealing

Because moisture enters the end grain of wood faster than through the side grain, all edges and ends of the siding should be protected with a sealer. Some APA Rated Sidings are edge sealed at the factory. Edge sealing is not permanent, nor does it necessarily make the edges moisture proof. It does, however, minimize sudden changes in siding moisture content due to weather cycles. A liberal application of a paintable water repellent should be used if the siding is to be finished with a semitransparent or solid-color stain. If the siding is to be finished with a house paint, use the same primer that is to be applied to the faces. This procedure is generally easiest to accomplish while the siding is in a stack. Edges or ends which are cut during construction should also be edge sealed.

Summary

When selecting finishes for APA Rated Siding, the surface characteristics or face grade should be considered. The desired appearance of the siding, the amount of protection provided by the finish and expected maintenance intervals should also be taken into account. Semitransparent stains allow the grain, surface texture and other wood characteristics to show through. Although they require the most frequent maintenance, they are generally easy to maintain. Solid-color stains provide greater protection to the wood surface and obscure the grain and surface repairs, but still allow the surface texture to show. Two-coat house paints, composed of a stain-blocking acrylic latex primer and an all-acrylic latex topcoat, provide the greatest protection and durability on APA Rated Sidings. All APA Rated Siding should be edge sealed. Always follow the finish manufacturer's recommendations.

We have field representatives in most major U.S. cities and in Canada who can help answer questions involving APA trademarked products. For additional assistance in specifying engineered wood products, contact us:

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