FINISHING OF WOOD – FOOTNOTES FROM THE FOREST PRODUCTS LABORATORY

RESAWN TEXTURED WOOD IS MOST DESIRABLE FOR FINISHING OR STAINING
FACTORY FINISHING IS SUPERIOR TO FIELD OR SITE FINISH APPLICATIONS

The following excerpts are taken from the Forest Products Laboratory's wood research report. The F.P.L. is part of the US Dept. of Agriculture. Other facts…

Forest Products Laboratory
Located in Madison, Wisconsin, since 1910 it is the nation's only federally funded wood utilization research laboratory which currently employs 60 Research Scientists and is primarily or partly responsible for many of today's wood-based technologies, including wood preservatives, glulam beams, oriented strandboard, & fiber-based packaging and has research partnerships located in virtually every state in the Nation

Cedar Valley Handcrafted Shingle Panels use the finest Cedar Shingles available with the most desirable traits for staining. Kiln dried Western Red Cedar shingles with a resawn texture. The resawn texture is referred to throughout the report in a great number of areas as the best option for retention of finishes, here are some excerpts:

"penetrating finishes such as solvent-borne oil-based semitransparent stains last longer on saw-textured wood than on smooth-planed wood, many film-forming finishes such as opaque stains and paints also last longer on saw-textured wood than on smooth-planed wood. Finishes adhere better, film buildup is thicker, and service life of the finish is longer on saw-textured surfaces than smooth-planed surfaces,"

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Application, New Construction
Semitransparent stains perform well on saw-textured surfaces. If used on smooth wood, expect approximately half the service life compared with saw-textured surfaces (Table 16–4).

Picture of cross grain sawing of shingles

Page 9 paragraph one:

Table 16–4. Suitability and expected service life of finishes for exterior wood surfaces[a]

	Tinted finishes such as deck finishes		Semitransparent stain		Paint and solid-color stain		
						Expected service life[d] (years)	
Type of exterior wood surface	Suitability	Expected service life[b] (years)	Suitability	Expected service life[c] (years)	Suitability	Paint	Solid-color stain
Siding							
Cedar and redwood							
Smooth (vertical grain)	Low	1–2	Moderate	2–4	High	10–15	8–12
Smooth (flat grain)	Low	1–2	Moderate	2–4	Moderate	8–12	6–10
Saw-textured	High	2–3	High	4–8	Excellent	15–20	10–15
Pine, fir, spruce							
Smooth (flat grain)	Low	1–2	Low	2–3	Moderate	6–10	6–8
Saw-textured (flat grain)	High	2–3	High	4–7	Moderate	8–12	8–10

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Factory Staining is far superior to site applications of finishes & stains and ensures the longevity of the finish.

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Factory Finishing

"Factory priming hardboard siding has been a standard industry practice for many years, and recently, factory-finished (primer and top-coats) siding, trim, and decking have become common. Factory finishing offers several advantages: avoids finishing during inappropriate weather, gives consistent film thickness, contributes to timely completion of structures, and decreases overall cost. Factory finishing is advantageous in northern climates where exterior finishing is impossible during the winter. Controlled application ensures consistent 0.10 to 0.13 mm (4 to 5 mil) dry film thickness,"

Factory finishing ensures that the wood does not weather at all prior to finishing. This detail is critical for getting the most longevity from the finish itself.

Page 11:

Effect on Paint Adhesion

"Wood erosion is slow, but chemical changes occur within a few weeks of outdoor exposure. Badly weathered wood having loosely attached fibers on the surface cannot hold paint. This is not obvious on wood that has weathered for only 2 to 3 weeks. The wood appears unchanged. Research has shown that surface degradation of wood exposed to sunlight for 1, 2, 4, 8, or 16 weeks prior to painting (pre-weathering) affects service life of subsequently applied paint. The longer the wood pre weathered, the shorter the time until the paint began to peel. For boards pre weathered 16 weeks, the paint peeled within 3 years; for boards pre weathered only 1 week, the paint peeled after 13 years. Panels that were not pre weathered showed no sign of peeling after 20 years. Paints were commercial oil-alkyd or acrylic-latex primer with one acrylic-latex top-coat over planed all-heartwood vertical-grain western red cedar."

What could be better than having your Cedar Valley Handcrafted Shingle panels factory finished? Doing it twice! Two coats are better than one coat and we have the warranty to prove it. Two semi transparent Sherwin Williams stain coats factory applied will qualify for a 25 year Cedar Valley product warranty! Maintenance conditions apply and coatings must be applied by approved finishers.

Page 19:

"Two coats of semitransparent penetrating stain may last 10 years on saw-textured wood. By comparison, the life expectancy of one coat of stain on new smooth wood is only 2 to 4 years,"

Sourced from: Forest Products Laboratory; US Department of Agriculture/ Forest Service/Research & Development

Report available online at:
http://www.fpl.fs.fed.us/documnts/fplgtr/fplgtr190/chapter_16.pdf