



Treated Primer Does Not Equate to Treated Wood

Preservative Treated Wood vs. Protective Coatings—Manufacturer’s Shortcuts May Lead to Liability

Exterior wood trim adds natural dimension and architectural interest to any home. With so many warranties and manufacturers’ claims to digest, separating technical fact from marketing hype is a challenge for industry professionals. This bulletin explains what true **preservative treated wood** is, how it protects users against future liability claims and why the **protective coating on wood** gives minimal, if any protection against rot and decay. *Accountability and credibility are the hallmarks to trusting a product and its producer.* The good news: exterior treated trim product awareness by builders is raising the bar forcing manufacturers to provide products that last. Nobody wants the hassles and cost of product replacement or the liability for costly court battles.

Wood Preservation vs. Protective Coatings

Wood preservation, as defined by the American Wood Protection Association, the industry’s standards developer:

“The technology of reducing and/or preventing the deterioration and destruction of wood by living organisms, particularly fungi, insects, and marine borers...through the application of wood preservatives.”

This critical, primary first step, starts before any discussion about protective coatings used to seal off weather’s adverse effects. ArmorCoat XT is treated with Wolman® AG, which is qualified by the AWPA as an approved preservative with strict application performance standards. These processes require weekly Quality Assurance (QA) sampling and monitoring to ensure proper wood penetration and preservative retention levels.

Protective coatings such as those featured in RealTrim Treated are defined as film forming primers and paints applied to the wood surface as a sealant. Many protective coatings contain mold and mildew inhibitors, but these are not designed for decay causing fungi. These primer additives, commonly known as Iodopropynyl butylcarbamate (IPBC), are registered by the EPA, and the allowable amounts are strictly regulated for each product. It is not known how much is used in the RealTrim products, but ArmorCoat XT primer contains the maximum amount allowed by the EPA. The same can be said for the efficacy of borates or PTI* when mixed with protective coating sealants. These protective coating with additives are nothing more than sealants or barriers to the wood substrate. *Break the seal and the wood beneath is now subject to structural decay and insect infestation.*

Can Treated Primer Equate to Treated Wood?

Suggesting that a film forming protective coating ‘sealant’ is comparable to a wood preservative just doesn’t pass the smell test. Exterior wood trim producers that believe in, and stand behind true preservative treatments (such as ArmorCoat XT® by Belco Forest Products), use a true two-step preservative treatment process to ensure the wood substrate is fully treated before adding the film forming protective coating.

Is it worth the risk to settle for unproven, non-standardized and non-transparent proprietary treatment processes?

“If it was possible to simply add some version of ‘preservative’, approved/certified or not, to the primer and retain a non-prorated warranty, we would have done it a long time ago,” said Roger Roatch VP of Sales and Business Development and AWPA member. In order to achieve a level of protection that is required by agencies like AWPA, the appropriate chemicals and processes must be regulated and followed, and only a two-step method can assure wood cell preservation. The science and physics don’t back up any claims that equate treated primers with preservative treated wood. Otherwise, it would be certified by an agency like AWPA that could verify the efficacy of the process with industry ASTM (American Society for Testing and Materials) standard testing methods.

ABOUT BELCO FOREST PRODUCTS— In business since 1978, the company operates three manufacturing plants on 16 acres in Shelton, Washington. Belco produces a variety of exterior wood products including the best-selling ArmorCoat XT brand, a line of premium treated products for residential and commercial applications. All Belco products are available through leading distributors nationwide.





Primers loaded with solids for specific purposes, make it virtually impossible for any effective attempt to separate additives from the primer and have any chance at penetrating the wood cells. Further, manufacturing requirements to accommodate production flow, eliminate the absorption/diffusion reaction because of the oven dry process. The minute wet primers are introduced to oven curing, any volatile liquid (solvent or water based) immediately flashes off, leaving only solids to cure. This eliminates the physical ability for either carrier to take any preservative treatment below the surface of the wood face.

Manufacturing Process and Cost

The certified two-step process is truly the only way to assure preservation and decay resistance of wood, wood fiber and into the structural cell walls. This process definitely comes at a cost, but compared with the added value and assurances, it is negligible to the end user and depends largely on the efficiency of the manufacturer's process. There is no simple shortcut to properly treating wood and it requires special equipment at the milling plant location(s), QA plant personnel to ensure process controls are monitored and finally, lab testing to ensure true efficacy of the preservative treatment process. This cannot be achieved by circumventing systems/processes developed by the treatment chemical producers and verified by AWWA, through rigid ASTM standardized performance testing. From a manufacturing perspective, it is essential to manage these processes by producing the product from start to finish in-house. This ensures consistent QA during the entire process that third party contracted fabrication simply can't offer. *ArmorCoat XT is manufactured entirely in-house and the end result is a true preservative treated exterior trim product that gives peace of mind to homeowners.*

What's Behind a Warranty?

If a product meets or exceeds all applicable industry standards for preservative treated wood and process controls ensure system efficacy, companies producing said product are fully transparent. They lead with the technology that provides end users assurances they deserve. Untreated, exterior primed and painted wood, exposed to constant wetting and drying cycles, can only be expected to last 7-13 years. It is irresponsible for professionals in the construction supply industry to offer something so unreliable and risk-prone to homeowners. The reason a 20 year "non-prorated" warranty exists, is that both the producer and chemical provider can rely on the science behind the AWWA/ASTM tested systems. Otherwise, a prorated warranty is hardly worth the paper it's printed on.

* Propiconazole-Tebuconazole-Imidacloprid (PTI)

Literature Cited

- Forest Products Laboratory. 1999;2010. FPL-GTR-113/190, Wood Handbook – Wood as an Engineered Material
- AWWA. 2017. Book of Standards. Birmingham, AL, American Wood Protection Association



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