

PRODUCT GUIDE



FRAMEGUARD[®] **TOTAL**[™] **WOOD**

PROTECTION FROM THE GROUND UP

FrameGuard® mold-resistant wood provides protection against mold, termites, and fungal decay in trusses, framing, OSB, SIPs, and other wood products used in interior applications. It is coated with a blend of anti-mold and borate chemicals. This water-based combination of EPA-registered, active components provides a broad spectrum of protection: the borate component is effective against decay and termite damage, while the fungicides protect against mold.

By using FrameGuard® wood, homeowners get a mold-resistant product and greater peace of mind, while builders and specifiers reduce their exposure to costly liability claims.



FrameGuard® wood protects this South Carolina home from mold, termites, and fungal decay.

Suitable for Many Wood Products

FrameGuard® coating was designed to provide protection to interior-use wood products, such as

- Framing & Truss Lumber
- Plywood Panels
- Engineered Wood Products
- Oriented Strand Board (OSB)
- Parallel Strand Lumber
- Laminated Veneer Lumber
- Wood I-Beams
- Structural Insulated Panels

FrameGuard® wood is suitable for single-family, multi-family and commercial construction projects.

FrameGuard® coated wood is not intended for use as internal sill plate, for exterior use, or for any other application where pressure-treated wood is required.



ADVANTAGES OF FRAMEGUARD® MOLD-RESISTANT WOOD

- Coated with anti-mold and borate chemicals to protect against:
 - mold
 - termites
 - fungal decay
- Prevents mold growth
- Reduces complaints and costly liability claims
- Protects wood without releasing harmful levels of emissions into the building
- Backed by a limited warranty
- EPA-registered active ingredients
- Applied under controlled conditions, not at job site
- Developed and backed by a global leader in wood protection
- Identified by a green colorant
- GreenSpec® environmentally preferable product, and winner of NAHB Green Building



GO GREEN!

You will know FrameGuard® wood when you see it. A distinctive green colorant identifies wood treated with FrameGuard® coating.

Engineered wood products, such as these Structural Insulated Panels (SIPs), can be protected by the FrameGuard® coating.

OFFERING A HOST OF ENVIRONMENTAL BENEFITS

Not only is FrameGuard® wood green in color (due to a colorant added to make the product easily identifiable), it's green from an environmental perspective, too.

By enabling wood to last a long time and resist mold, FrameGuard® wood extends forest resources and reduces the need for replacement lumber. Plus, FrameGuard® wood offers a host of environmental advantages associated with wood itself:

- It is made from plentiful species of wood, the only major building product that is a renewable resource.
- The trees come from managed timberlands where they grow rather rapidly. They are replenished in as little as two decades' time.
- The collection and processing of this resource uses less energy than that required for production of alternative materials.
- Growing trees absorb carbon dioxide and wood products store carbon, thereby reducing greenhouse gases.
- Wood provides noteworthy insulation with regard to heat, noise, and electrical current.
- A study by the Consortium for Research on Renewable Industrial Materials (CORRIM) found wood framed homes more environmentally friendly than steel or concrete. Total energy in the completed steel-frame house was 17% greater, and the concrete-framed house was 16% greater, than the completed wood-frame house.



The FrameGuard® coating prevents mold growth and thus reduces airborne mold spores.



The FrameGuard® coating keeps lumber looking cleaner and brighter during storage, construction, and beyond. This is especially important to truss and component manufacturers whose end products tend to be exposed to the elements longer than other framing materials.

RECOGNIZED FOR ITS GREEN CHARACTERISTICS



- Selected for the GreenSpec® directory of environmentally preferable products
- Winner NAHB Green Building Award



There is only one chance to install mold-resistant wood: when the home is built.

TECHNICAL DATA

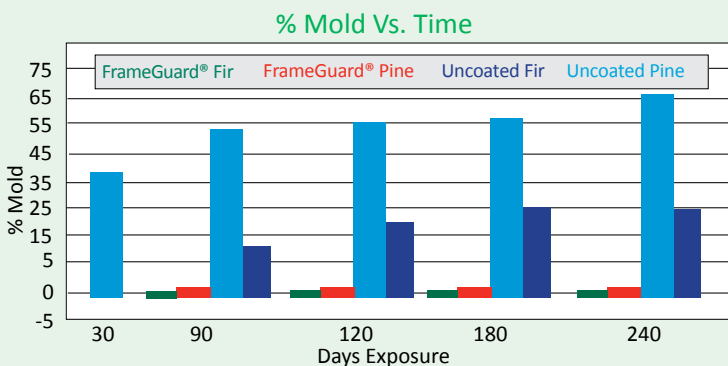
HOW IT WORKS

FrameGuard® wood is protected with anti-mold fungicides and a borate compound, proven to be effective. The fungicides remain close to the surface to provide protection against mold. Moldicides inhibit mold's ability to break down the wood and

consume the sugars and starches mold needs for growth; thus, wood becomes unattractive as a food source. Meanwhile the borate component penetrates into wood providing protection against both decay and insects.

MOLD PROTECTION

A field study comparing FrameGuard® coated wood samples and uncoated controls has demonstrated the effectiveness of the protection. Exposed to the elements (not shielded from weather as in actual use) in the demanding environment of Ft. Myers, Fla., the test samples showed that FrameGuard coating provided excellent protection against mold growth on both southern pine and spruce/pine/fir.



After one year and 76.3" of rainfall, there was significantly less growth of mold on corresponding samples of FrameGuard® wood. Weather-shielded samples of FrameGuard® wood had virtually no mold after the year's test.

Another mold study, conducted by an independent firm, tested various alternatives and revealed the superiority of FrameGuard® wood. A copy of the report is available from Arch Wood Protection, Inc.



STRENGTH PROPERTIES

A test conducted by Timber Products Inspection showed that FrameGuard® coating has no significant effect on strength of lumber and other wood products. FrameGuard® wood exhibits strength properties comparable to those of uncoated wood of the same size, species, grade and moisture content.

	Orientation 1	Orientation 2	Orientation 3	Overall Average
Before Treatment	2.15	2.12	2.14	2.14
After Treatment	2.14	2.11	2.14	2.13

An independent agency, Timber Products Inspection, performed E computer testing on 50 samples of 2x4 southern pine, before and after coating with FrameGuard solution. The results indicated no significant difference in strength values from the coating.

FASTENERS

Two separate tests, one conducted in accordance with AWWA E12 procedures using metal coupons and the other involving actual metal truss plates, showed comparable corrosion levels for FrameGuard® wood and uncoated controls. Specify the same hardware as you would for use with ordinary wood.

AWWA E12 Corrosion Test*

120°F and 90% Relative Humidity • Loss in Mills per Year

Metal	30-day		60-day	
	Control	Coated	Control	Coated
Aluminum 2024	0.0	0.1	0.0	0.1
Carbon Steel 1010	0.0	0.2	0.0	0.3
Standard hot-dip galvanized	0.6	0.3	0.4	0.3
G 90 electroplated	0.3	0.7	0.9	1.2

* Standard exposure is 10-15 days

PLATE HOLDING STRENGTH

In lateral resistance/tooth holding tests conducted by MiTek Industries, Inc., samples of FrameGuard® wood performed with no statistical difference to matched, uncoated samples of southern pine and spruce/pine/fir.

ADDITIONAL PRODUCT DATA

APPLICATION OF COATING

To maintain a high level of performance for the coating, it is applied only under controlled conditions where the quality of coverage can be assured. It is not applied at jobsites, but at facilities such as truss plants, SIP plants, and wood treating plants that have installed suitable spraying or dipping equipment. Because of the diffusion of the treating solution, it is not necessary to field-treat wood exposed by sawing or drilling. Its use does not require a pesticide applicator license.

SAFETY INFORMATION

The active ingredients in FrameGuard® coating are EPA-registered and are commonly used in various applications. FrameGuard® coating gives off no airborne particles, has minimal odor, is easy to handle, and for most people poses no health or environmental problems when used correctly.

USE & HANDLING RECOMMENDATIONS

When handling FrameGuard® wood, the same common sense precautions should be taken as with handling untreated wood. Dust masks and eye protection devices are recommended to avoid possible irritation from sawdust and wood chips. Gloves will help to avoid splinters. Hands should be washed after doing construction work.

PAINTING

FrameGuard® coated wood products, including plywood and OSB, can be painted without any bleed-through effect. For best results, use a minimum of one coat of primer and one coat of paint, or two coats of paint. (One coat of paint is not sufficient to prevent bleed-through of the color.) Note: When the surface of FrameGuard® wood is coated with a paint, the surface mold protection is hindered. To retain mold protection, we recommend using a mold-resistant, low VOC paint.

DISPOSAL

FrameGuard® coated wood can be disposed of in ordinary construction and demolition landfills and industrial landfills. Disposal should be in accordance with local, state and federal guidelines. Do not burn, or use chips or sawdust as mulch.

AVAILABILITY

Contractors can obtain FrameGuard® coated wood from their suppliers of lumber and wood components.



MODEL SPECIFICATION

You will find a model specification on the inside back page of this brochure. For an editable, electronic version, go to www.frameguardwood.com/modelspec.

BUILDING CODES

While the Model Building Codes currently do not require the use of mold resistant wood, green building standards may grant credits for using FrameGuard® wood.

AIA CEUS

Learn more about mold-resistant wood and earn one AIA Learning Unit in the Health, Safety, Welfare area. Visit www.ronblank.com and looking for the course under Wood & Plastics.

ABOUT THE DEVELOPER

Arch Wood Protection, Inc., developer and manufacturer of the FrameGuard® coating, is an acknowledged leader in wood preservation technology. Along with its international affiliates, Arch Wood Protection, Inc., manufactures wood preservatives, fire retardants, and anti-sapstain products, and licenses the best known brands of pressure-treated

wood in the industry, including Wolmanized® wood and Dricon® fire retardant treated wood. Arch Wood Protection, Inc., is a subsidiary of Arch Chemicals, Inc., a publicly traded U.S. company, internationally respected for its creation and production of treatment chemicals and biocides.



FRAMEGUARD® TREATED WOOD FRAMING COMPONENTS LIMITED WARRANTY

1. Limited Warranty.

a. Subject to the definitions, terms and conditions set forth below in this Limited Warranty, Arch Wood Protection, Inc. ("Warrantor") warrants to each Qualified Owner¹ that each FrameGuard® treated wood Component² will (i) prior to use or installation, remain free of Mold³ for a period of 180 days following the Date of Treatment⁴, (ii) when Properly Installed⁵ in a Qualifying Structure⁶, remain free of Mold for a period of 20 years following the Date of Installation⁷ provided that the Qualifying Structure in which such Component is Properly Installed is Properly Maintained⁸ continuously during such 20-year period, (iii) when Properly Installed in a Qualifying Structure, remain free of Structural Damage⁹ resulting from termites (other than the Formosan termite (*Coptotermes formosanus*)) or decay fungi for a period of 20 years following the Date of Installation provided that the Qualifying Structure in which such Component is Properly Installed is Properly Maintained continuously during such 20-year period.

¹ "Qualified Owner" means with respect to a Component, (a) any person that purchases such Component for installation by such person in a Qualifying Structure, (b) the original legal owner of the Qualified Structure in which such Component is Properly Installed, and (c) each person who takes legal title to such Qualifying Structure prior to the 20th anniversary of the Date of Installation.

² "Component" means any truss, lumber, plywood, oriented strand board (OSB), wood I-beam, structural insulated panel (SIP), parallel strand lumber (PSL), laminated veneer lumber (LVL), or other wood product intended for use in interior framing that has been properly treated by a licensee of Warrantor using FrameGuard® wood preservative treatment chemicals in conformity with the FrameGuard® Manual of Standard Practice (as in effect at the time of such treatment).

³ "Mold" means filamentous fungi in the phyla Zygomycota other than staining fungi (such as blue stain).

⁴ "Date of Treatment" means, with respect to any Component, the date on which wood was coated as evidenced by a written statement or marking on the wood.

⁵ "Properly Installed" means, with respect to a Component, that such Component was installed (a) in accordance with all applicable building codes, and (b) within a Qualifying Structure, in an above-ground location that is not intended (based on architectural drawings or building plans) to become exposed to water or other liquids at any time during the occupancy of such Qualifying Structure and that is in fact continuously protected from actual or potential exposure to precipitation beginning not later than 180 days following the Date of Treatment of such Component.

⁶ "Qualifying Structure" means a building (a) constructed within the continental United States in accordance with all applicable building codes (and inspected and certified as to such compliance by a local building code official); (b) constructed with a sill plate made of wood pressure treated in accordance with American Wood Protection Association Standard UC2 (as amended or replaced as of the date of installation) installed between the foundation and all framing; and (c) pretreated against termites with an EPA-registered termiticide applied (i) prior to installation of any Component, (ii) by a pest control operator licensed to perform such work in the state in which such building is located, and (iii) in accordance with all label recommendations applicable to pretreatment against termites and all applicable state and local building code requirements. With respect to sill plate construction, Warrantor recommends the use of Sillbor® Borate Pressure Treated Wood. With respect to pretreatment against termites, Warrantor recommends the use of Bora-Care® termiticide (if it is an acceptable pretreatment under applicable building codes). Use of Sillbor® Borate Pressure Treated Wood and/or Bora-Care® termiticide, however, is not required provided that substitutes meeting the above standards are used.

⁷ "Date of Installation" with respect to a Component means the date on which such Component is Properly Installed.

⁸ "Properly Maintained" with respect to a Qualifying Structure means that (a) such Qualifying Structure is inspected for the presence of termites and Mold not less than once per year by a certified pest control operator licensed in the state where such Qualifying Structure is located, and (b) all additional treatment and remedial work recommended by the pest control operator performing any such inspection is performed in a timely manner.

⁹ "Structural Damage" means damage to a Component which renders such Component incapable of structurally performing the intended function of such Component.

* "Bora-Care" is a registered trademark of Nisus Corporation.

b. This Limited Warranty DOES NOT apply to or cover:

- (i) Damage to any Component that has been exposed to any accumulation of moisture or repetitive wetting after its Date of Installation;
- (ii) Damage to any Component that has not been Properly Installed in a Qualifying Structure (as such terms are defined in Section 1 above);
- (iii) Damage to any Component installed in any structure that has not been Properly Maintained (as defined in Section 1 above) continuously from

and after the Date of Installation (as defined in Section 1 above) of such Component;

- (iv) Damage covered by any termite bond relating to the Qualifying Structure or any portion thereof or any warranty given by a pest control operator or pretreatment manufacturer with respect to the Qualifying Structure or any portion thereof (coverage under such bond or warranty must be sought prior to submitting a claim under this Limited Warranty);
- (v) Any Component that has been misused or subject to improper handling, storage, installation, or maintenance;
- (vi) Damage to any Component resulting in whole or in part from any of the following: (A) any physical disturbance of soil subsequent to pretreatment if pretreatment was applied to soil); (B) any improper or incorrectly performed alteration to the Qualifying Structure made after the original installation of the Component(s) and/or failure of such alteration to meet or exceed all requirements of this Limited Warranty as applicable to original construction; or (C) any acts of God such as lightning, wind storm, hurricane, tornado, hail, flood, or other similar severe weather or similar natural phenomena; or
- (vii) Any cost associated with removal of damaged Components or transport, handling, delivery or installation of the replacement Component(s).

2. Exclusion of Warranties

THIS LIMITED WARRANTY IS THE ONLY EXPRESS WARRANTY MADE BY WARRANTOR WITH RESPECT TO COMPONENTS AND EXCLUDES ALL OTHER EXPRESS OR IMPLIED WARRANTIES. WARRANTOR SPECIFICALLY DISCLAIMS ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, AND ANY OTHER IMPLIED WARRANTIES OTHERWISE ARISING FROM THE COURSE OF DEALING OR USAGE OF TRADE OR ADVERTISING, EXCEPT TO THE EXTENT SUCH DISCLAIMERS ARE PROHIBITED BY APPLICABLE CONSUMER LAW. NOTHING IN THIS LIMITED WARRANTY IS INTENDED TO CREATE ANY IMPLIED WARRANTIES, EXTEND SAME BEYOND THEIR CUSTOMARY DURATION, OR MAKE WARRANTOR LIABLE FOR ANY IMPLIED WARRANTIES THAT IT WOULD NOT BE LIABLE FOR IF THIS LIMITED WARRANTY HAD NOT BEEN GIVEN.

3. Remedies, Exclusions of Remedies, and Limitation of Liability

With respect to any Component that fails to conform to the warranties set forth herein, the Qualified Owner's sole and exclusive remedy and Arch Wood Protection, Inc.'s sole and exclusive liability will be for remediation or replacement, at Warrantor's option, of such nonconforming Component, and under no circumstances will Warrantor be liable for construction, repair, or other costs related to replacement of any nonconforming Component.

In no event will Warrantor be liable for any incidental, special, indirect, multiple, punitive or consequential damages resulting from any defect in any Component, including but not limited to personal injury, damage to property or lost profits. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion may not apply to you.

4. Claims

Any claim that a Component has failed to conform to this Limited Warranty must be submitted to Warrantor in writing within thirty (30) days after discovery of such failure, and before beginning any permanent repairs. The person submitting any such claim assumes responsibility for a reasonable service and travel charge as billed by Warrantor if inspection of the structure does not reveal that any Component fails to conform to this Limited Warranty. In order to be processed by Warrantor, the claim must include the Date of Treatment, the Date of Installation and the treating company name noted on the Component(s). The claim must be mailed to Arch Wood Protection, Inc., 5660 New Northside Drive, Suite 1100, Atlanta, GA 30328.

It is the Qualified Owner's responsibility to establish the Date of Treatment and the Date of Installation, the date of pretreatment application and the date of any subsequent inspections, treatments, and remedial work. The Qualified Owner should do this by retaining any records relevant to the foregoing including: purchase invoices and receipts, building permits, contractor and service billings, service contracts, pretreatment certificates, and pest control inspection reports.

Upon reasonable notice, the Qualified Owner must allow Warrantor's agents to enter the property and building on which the Product(s) is installed to inspect such Product(s). Warrantor will perform its obligations under this warranty, if any, within ninety (90) days of receiving complete information from Qualified Owner.

This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For further information, contact:

Arch Wood Protection, Inc.
5660 New Northside Drive
Suite 1100
Atlanta, GA 30328

MODEL SPECIFICATION

MOLD-RESISTANT TREATED WOOD

SECTION 06 05 76

For a downloadable, editable version of this model specification, please see www.frameguardwood.com/spec.

PART 1 — GENERAL

1.1 SUMMARY

- A. Section Includes: Shop-applied mold-resistant treatment of:
 - 1. [Framing lumber.]
 - 2. [Plywood.]
 - 3. [Oriented strand board.]
 - 4. [Engineered wood products.]
 - 5. [Parallel strand lumber.]
 - 6. [Laminated veneer lumber.]
 - 7. [Wood I-beams.]
- B. Related Sections:
 - 1. Division 01: Administrative, procedural, and temporary work requirements.
 - 2. Section [06 11 00 - Wood Framing] [____ - ____]: Lumber for mold-resistant treatment.
 - 3. Section [06 12 00 - Structural Panels] [____ - ____]: Wood faced panels for mold-resistant treatment.
 - 4. Section [06 15 00 - Wood Decking] [____ - ____]: Decking for mold-resistant treatment.
 - 5. Section [06 16 00 - Sheathing] [____ - ____]: [Plywood] [Oriented strand board] sheathing for mold-resistant treatment.
 - 6. Section [06 17 00 - Shop-Fabricated Structural Wood] [____ - ____]: Engineered lumber for mold-resistant treatment.

1.2 REFERENCES

- A. American Wood Protection Association (AWPA):
 - 1. E1-06 — Standard Method for Laboratory Evaluation to Determine Resistance to Subterranean Termites.
 - 2. E12-94 — Standard Method of Determining Corrosion of Metal in Contact with Treated Wood.
- B. ASTM International (ASTM) – D 3273-00 (2005) — Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber.
- C. Environmental Protection Agency (EPA) — Registered products listing.

1.3 SUBMITTALS

- A. Submittals for Review:
 - 1. Product Data: Manufacturer's descriptive data and test results for treated products.
 - 2. Samples:
 - a. [12] [__] inch long treated lumber samples.
 - b. [12 x 12] [__ x __] inch treated [plywood] [oriented strand board] samples.
- B. Sustainable Design Submittals:
 - 1. Low-emitting materials.
 - 2. Innovation in design.
- C. Quality Control Submittals:
 - 1. Current EPA approval listing.

1.4 QUALITY ASSURANCE

- A. Applicator Qualifications: Licensed by mold treatment manufacturer.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver treated products bearing manufacturer's quality stamp indicating:
 - 1. Inspection agency.
 - 2. Month and year of application.
 - 3. Treatment facility.
 - 4. Treatment used.
 - 5. Suitable end uses for products.
- B. Store treated products off ground.

1.6 WARRANTIES

- A. Furnish manufacturer's warranty providing coverage against:
 - 1. Development of mold on treated products for 180 days prior to installation.
 - 2. Development of mold on treated products for period of 20 years after installation.
 - 3. Structural damage by termites other than Formosan termites for period of 20 year after installation.

PART 2 — PRODUCTS

2.1 MANUFACTURERS

- A. Contract Documents are based on FrameGuard wood treatment by Arch Wood Protection, Inc.
- B. Substitutions: [Under provisions of Division 01.] [Not permitted.]

2.2 MATERIALS

- A. Treatment Chemicals:
 - 1. Proprietary broad-spectrum anti-mold and borate chemicals.
 - 2. Registered with EPA.
- B. Treated Wood:
 - 1. Mold growth: 0 rating, tested to ASTM D 3273 for 8 weeks at 77 degrees F and 100 percent relative humidity.
 - 2. Termite resistance: Minimum rating of 7.0, tested to AWPA E1.
 - 3. Corrosion potential for metals in contact with treated wood: Maximum 2 mils per year, tested to AWPA E12 for minimum of 60 days on aluminum 2024, carbon steel, hot-dip galvanized steel, and G90 galvanized steel.
 - 4. Equivalent lateral resistance and tooth holding capacity as untreated wood.

2.3 FABRICATION

- A. Apply mold-resistant treatment to scheduled components under controlled conditions by spray or dip method, to retention levels required by treatment manufacturer.

PART 3 — EXECUTION

3.1 INSTALLATION

- A. Install mold-resistant treated products under provisions of Section[s] [06 11 00] [06 12 00] [06 15 00] [06 16 00] [06 17 00] [____].
- B. Treatment of field cuts and holes is not required.

FRAMEGUARD[®] WOOD IN ACTION



ARCH WOOD PROTECTION, INC.

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SUITE 1100

ATLANTA, GA 30328

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