

EXTIRA[®]
by JELD-WEN



EXTIRA PANELS ARE READY TO WORK

EXTIRA PRODUCT INFORMATION, WARRANTY AND APPLICATION INSTRUCTIONS



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MOISTURE RESISTANT: As measured by ASTM D1037 for Water Absorption and Thickness Swelling.

ROT RESISTANT: As measured by AWPA E-16 Field Test for Evaluation of Wood Preservatives to be Used Out of Ground Contact: Horizontal Lap-Joint Method.

TERMITE RESISTANT: As measured by AWPA E-7 Standard Method of Evaluating Wood Preservatives by Field Tests with Stakes.

EXTIRA IS A REVOLUTIONARY PRODUCT FOR EXTERIOR APPLICATIONS THAT PERFORMS BETTER THAN WOOD OR MDF

	EXTIRA PANELS	TYPICAL MDF
APPLICATION	Exterior	Interior
COMPOSITION	Wood, phenolic resins, zinc borate, wax and other ingredients. No added urea formaldehyde.	Wood, urea formaldehyde resin. May emit formaldehyde.
MANUFACTURING PROCESS	Proprietary, patented steam injection technology using TEC™ manufacturing process.	Pressed between hot platens in an open press without steam injection.
BENEFITS	Consistent density. Resists moisture, rot and termite. Made for exterior performance.	Not uniformly dense throughout. No termite or rot protection. MR MDF (moisture resistance MDF) only offers moisture resistance for interior use.
WARRANTY	10 years	30 days

	EXTIRA 3/4"	MEDEX 3/4"	MR 50 GRADE 110 PER ANSI 208.2-2002	WOOD
THICKNESS SWELL (TS)	2.3%	3% ²	5% max	NA
ADVANCED BOND INTEGRITY (% strength retention)	90% ASTM D1037-96	Passes ²	50% min	NA
TERMITE RESISTANCE (10 is the highest score)	7.9 out of 10 (3 year exposure) ¹	None	None	None, 0.0 ¹
ROT RESISTANCE (0 is the highest score)	1.0 out of 5 (3 year exposure) ¹	None	None	None, 5.0 ¹

¹ Independent testing per AWPA E-7 and AWPA E-16

² Published material by Medex

WITH FIVE THICKNESSES AND THREE PANEL SIZES, EXTIRA MEASURES UP TO ANY PROJECT

EXTIRA PANEL SIZES AND THICKNESSES

SIZE (NOMINAL)	THICKNESS (+/-0.005")						
	7/16"*	1/2"	5/8"	11/16"*	3/4"	1"	1-1/4"
4' x 8' (49" x 97")	●	●	●	●	●	●	●
4' x 16' (49" x 194")	●	●	●	●	●	●	●
2' x 16' (25" x 194")	●	●	●	●	●	●	●

*Available by special order.



MANUFACTURING PROCESS BINDS NATURAL WOOD FIBERS WITH PHENOLIC RESINS AND ZINC BORATE.

Extira panels can be used for any non-structural paint-grade application, including exterior millwork, door and window parts, signage, and architectural components. While designed for exterior use, Extira panels also work well in high moisture interior applications such as bathrooms, medical installations, laboratories, countertop underlayment and casework.

EXTIRA – EXTERIOR GRADE SMOOTH TWO SIDE PANELS

- Extira is sold in panel dimensions, unprimed and is smooth on both sides.
- Extira meets industrial caliper requirements of +/- 0.005".
- Easy to work with; can be carved, routed and machined.
- Resists moisture, rot, and termites. Extira is made to be used outside.
- No added urea formaldehyde; made from sustainable materials.
- Made from the same proprietary process that creates MiraTEC® trim. Extira has the same performance properties.
- Class C fire rating; Flame spread 120; Smoke developed 95.
- Extira has a 10-year limited warranty that far exceeds competitive panel products.

EXTIRA IS THE BEST ALTERNATIVE

EXTIRA VS. THE COMPETITION

	EXTIRA	MDF	PLYWOOD	MF	PVC
Price	\$\$	\$	\$	\$\$	\$\$\$\$
Moisture Resistance	Good	Poor	Poor	Good	Best
Rot Resistance	Best	None	None	None	Best
Weathering ³	Good	Poor	Poor	Good	Good
UV Resistance ³	Good	Good	Best	Good	Poor ²
Warranty	10-Year	30-Days	None	Varies	5-Year to Lifetime
Machineability	Good	Good	Poor	Poor	Varies
Paintability ³	Best	Best	Good	Best	Poor

² PVC may have UV-related issues when painted a dark color

³ Ratings reflect uncoated material ranking. Extira must be field finished before use



EXTIRA PANELS CARVE BEAUTIFULLY



EXTIRA MACHINES WELL



ROUTE EXTIRA FOR ALL YOUR SIGN NEEDS

EXTIRA[®]

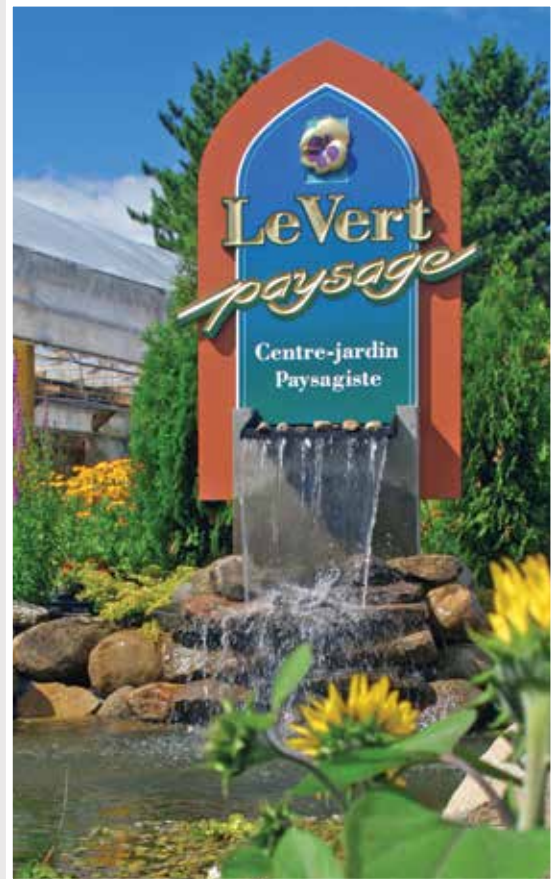
by JELD-WEN



SUPERIOR PERFORMANCE FOR EXTERIOR SIGNS

RESISTS MOISTURE, ROT AND TERMITES

Choosing material for outdoor signage can be challenging. Extira panels are backed by our 10-year limited warranty and ready to work outside.





ENVIRONMENTALLY FRIENDLY PANEL PRODUCT

SUSTAINABLE MATERIALS

- No old growth wood is used in the manufacture of Extira panel. It is made from wood that has no commercial timber value and is the byproduct of other operations. This leftover wood is also detrimental to the overall vitality of the forest.

>> All wood comes from an area within a 150-mile radius of the Towanda, PA production facility.

>> JELD-WEN® uses 100% northern hardwoods, which include maple, beech, oak and other species.

- Extira panel is treated with zinc borate, an EPA-registered biocide and a naturally occurring earth mineral that is environmentally safe and ensures protection against termites.

NO ADDED UREA FORMALDEHYDE

- Extira panel has no added urea formaldehyde. This is certified by Scientific Certification Systems under certificate number SCS-NAUF-01802.
- Through repeated testing by the Composite Panel Association (CPA), MiraTEC trim has demonstrated formaldehyde emissions equivalent to background levels found in the environment.

COMPLIES WITH CARB

- Extira panel is acknowledged by the California Air Resources Board's (CARB) Airborne Toxic Control Measure (ATCM) 93120 to utilize exempt status ultra-low emitting formaldehyde (ULEF) resins.

CONTRIBUTES TO GREEN BUILDING PROGRAMS

- Extira panel contributes to industry programs such as LEED and the National Green Building Standard.™



TOWANDA, PA MANUFACTURING FACILITY



LEFTOVER WOOD IS A PRIMARY INGREDIENT OF EXTIRA



INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

EXTIRA®
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GENERAL INFORMATION:

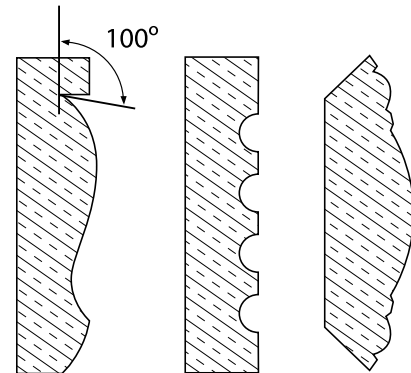
Extira was conceived and engineered to resist moisture, rot and termites, so it is perfect for exterior non-structural applications. It handles like wood but is smooth on both sides, and is sanded to meet caliper requirements of +/- 0.005".

MATERIAL SELECTION:

Extira panels are available in the following thicknesses: 1/2", 5/8", 3/4", 1" and 1-1/4". For exterior moulding and millwork applications, JELD-WEN, Inc. does not recommend using the 1/2" product other than when it is mechanically fastened or laminated to another substrate. Use 5/8" or thicker panels for soffit applications.

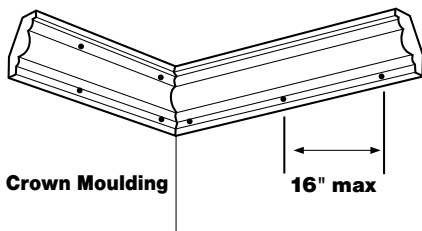
CUTTING AND MACHINING:

Use a fine-tooth hand saw or power saw with a combination blade. Cut into the exposed face of the material. Use only carbide-tipped or diamond-tipped blades with Extira panels. To produce decorative applications, rout, groove or machine Extira panels. The routed or grooved product should not have any surfaces where water can accumulate. Maintain an angle of at least 100 degrees from the vertical to provide positive drainage and to best ensure that moisture does not accumulate on Extira.



FASTENING REQUIREMENTS:

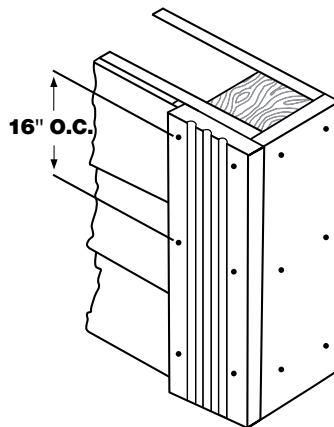
Extira panels are a non-structural composite product and should not be used where structural lumber properties are required. Extira panels are designed to be applied to structural framing, sheathing and other structural materials.



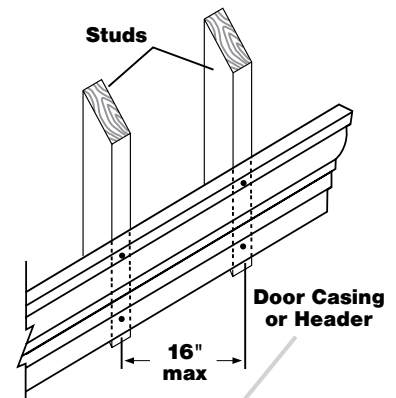
Crown Moulding

16" max

Door or Window Trim Molding



16" O.C.



Studs

Door Casing or Header

16" max



INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

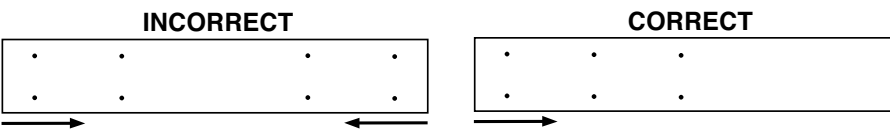
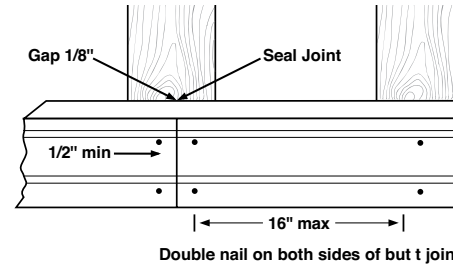
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by JELD-WEN



BUTT JOINTS:

All joints must fall over a framing member. For runs less than 30', butt joints should lightly touch. Space all butt and scarf joints over 30' 1/8" apart and apply flexible sealant into the full depth of the 1/8" joint. Joints must be double nailed on both sides as noted in the diagram above.

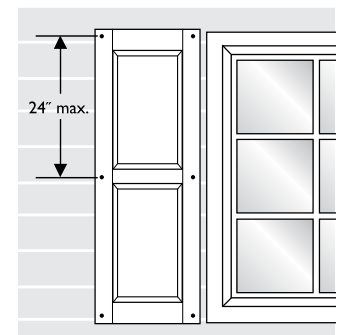
Note: Nail at least 1/2" from edge, but no more than 2" from edge. Do not nail into cut end of Extira panels. For fascia, Extira panels must be double nailed and fastened a maximum 24 inches-on-center. For all other applications, double nail 16" on center.



Fasten Extira panels from one end to the other end. DO NOT nail toward the center from both ends.

SHUTTERS:

Extira panels can be used to make decorative shutters. The shutter must be fastened to the home 24" on center around the perimeter of the shutter as shown in the illustration. Working shutters will not be covered under the Extira warranty due to the inability to provide adequate fastening on the non-hinge side of the shutter.



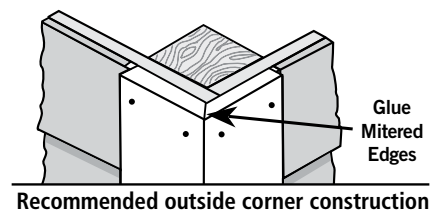
FASTENERS:

Fasteners must be equal or better in performance (such as nail withdrawal, bending strength and corrosion resistance) to 6d or 8d 15 gauge finish nails or headed nails, long enough to penetrate 1 1/4" into structural wood studs or studs and structural sheathing material. Use nails with corrosive resistance equivalent to hot-dipped galvanized nails. For buildings utilizing steel studs, use ET&F fasteners: AST-075 for 5/8" and 3/4" Extira and AST-100 for 1" Extira. For installations near oceans, large bodies of water or in high humidity climates, JELD-WEN, Inc. recommends using stainless steel fasteners on Extira. For these installations, do not use electro-galvanized fasteners, due to poor long term rust resistance.

Tapered or bugle head fasteners are permitted when the heads are properly sealed from moisture.

Nail heads, or any other dents, can be filled with exterior grade spackling putty specifically designed for filling nail holes. Allow putty to dry, sand smooth with 100 grit sandpaper and spot prime before painting. Over time, spackling putty may need to be replaced or touched up.

Use a nail that is appropriate to the style of construction.



CONDITION		CONDITION
Snug		OK
Flush		OK
Visible fiber		Paint
Counter sunk 1/16" - 1/8"		Exterior putty
Counter sunk more than 1/8"		Exterior putty & add nail

INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

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FLASHING AND MOISTURE CONTROL:

The structure on which Extira panels are applied should be well ventilated and dry. Do not apply moulding over wet sheathing, or any closer than 6" to finished grade or final landscaping. As with all wood products, Extira panels should not come in direct contact with masonry or concrete. Properly flash and space at least 1/2" from any concrete flatwork (such as porches, patios, or driveways) or horizontal brick ledges. Flatwork should slope so water flows away from Extira panels. In all applications, Extira panels should not stand in water or have water accumulate near them. At foundations or exterior brick veneer, the product should be separated from the masonry by metal flashing, polyethylene film, 30 lb. felt or a 1/4" to 1/2" air space using masonry standoffs. For applications near rooflines when Extira panels are used as trim, such as dormers and chimneys, the trim should be installed with a minimum of 1" clearance between the roofing and the bottom edge of the trim. At the junction of the roofing material and vertical surfaces, flashing is required per the roofing manufacturers' application requirements and local building codes.

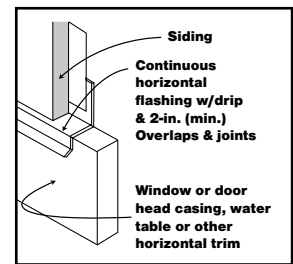
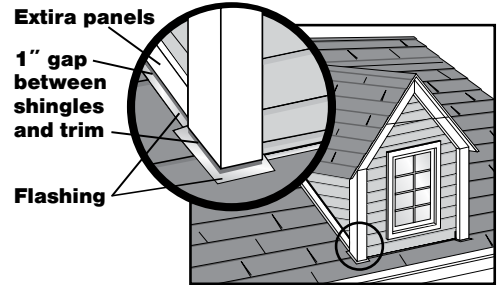
Seal the trim applications to prevent water intrusion. Do not allow water to stand on or leak behind any Extira panels used as trim. Extira panels used as trim in a horizontal application, including window and door headers, must be properly flashed in accordance with the siding manufacturers', window manufacturers', or door manufacturers' application requirements and local building codes.

SEALANT AND ADHESIVES:

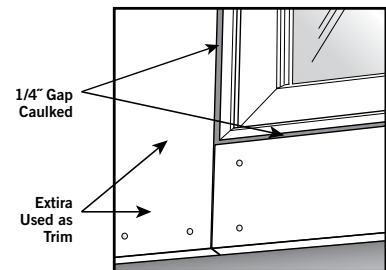
Sealant is required at butt joints and where Extira panels abut siding, windows, doors or other materials. Use only exterior quality sealant that remains flexible over time. Do not use hard-setting caulk. Apply caulk or sealant according to the manufacturer's written instructions. We recommend use of caulks and sealants that meet or exceed ASTM C920. Glues or adhesives can be used on Extira. Consult our Using Extira Bulletin for more information at www.miratecextira.com.

PAINTING/FINISHING REQUIREMENTS:

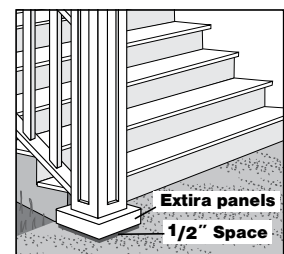
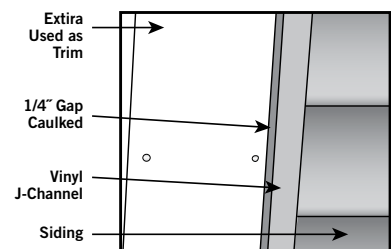
Extira panels are manufactured from wood and must be primed and painted with an exterior coating system in accordance with the following specification within 90 days of installation to fulfill the Extira panel warranty requirements. Use a field finish system recommended by the paint manufacturer for use on a composite wood product. Always follow the paint manufacturer's recommendations for the application and maintenance of field-applied paints. Test the coating system on a small area of Extira panel first before finishing large pieces.



Window Trim



Using with vinyl J-Channel



INSTALLATION GUIDELINES

WHEN USING EXTIRA® PANELS FOR EXTERIOR MOULDINGS AND MILLWORK

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PRIMER AND PAINT APPLICATION:

1. The surface must be free of dust, dirt, mildew and other foreign materials before priming.
2. Prime and paint all exposed surfaces and field-cut edges, including the bottom edge of Extira panels using a high quality exterior oil/alkyd solvent based or acrylic latex primer recommended by the paint manufacturer for application over composite wood substrates.
3. **A total field-applied dry film paint thickness of a minimum of 4 mils is required on Extira panels.** This requires the application of a primer and two or more unthinned coats of topcoat at the spread rate recommended by the paint manufacturer.

Note: The paint manufacturer may require a specific primer and topcoat combination. Use of primer and/or topcoats should be determined according to the manufacturers recommendations.

JELD-WEN, Inc. does not recommend using the following coatings:

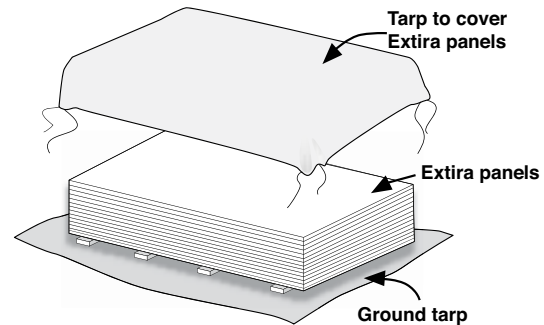
Shake and shingle paints	Vinyl acrylic paint*
Vinyl acetate co-polymer paint	Vinyl acetate paint
Clear coatings	Flat oil paint
Transparent or semi-transparent stains	Opaque solvent stains

* Although vinyl acrylic exterior paints contain acrylic resin and may be readily available, they are generally of lower quality and will not last as long as 100% acrylic paints. If you are unsure, ask your paint supplier.

JELD-WEN, Inc. is not responsible for the performance of finishes. Finish performance is dependent upon coating quality and application methods. These factors are controlled by the finish manufacturer and applicator.

STORAGE:

Inside storage of Extira is recommended and preferred. Cover when stored outside. Keep Extira panels off the ground and dry. Excessive moisture pickup from improper storage may affect the performance of Extira panels. Ensure the material is fully dry before installation. For job site storage, Extira panels should be placed on stringers and stored on concrete, asphalt or a similar surface. For all other instances, a tarp should be placed over the ground cover under the stringers, with the material still under cover.



IMPORTANT: Read and understand all application instructions before installing material. The statements expressed in this technical bulletin are the recommendations for the application of the products as outlined and illustrated under normal conditions of installation. JELD-WEN, Inc. is a manufacturer of building materials. It does not practice architecture or engineering. The recommendations provided in this bulletin represent JELD-WEN, Inc.'s best judgment based on JELD-WEN, Inc.'s experience to date with normal applications. These instructions supplement standard building practices and building code requirements; they are not to be deemed exclusive or exclusionary of these practices and requirements. Unless prior approval is obtained in writing from the Product Performance Department of JELD-WEN, Inc., PO Box 311, Towanda, PA 18848, any deviation from these recommended procedures shall be at risk of the installers.

These application instructions are the minimum requirements for the storage, application, and finishing of the products manufactured by JELD-WEN, Inc.. Where building code requirements or standards are more restrictive, the applicable regulations must be followed. Consult your local Representative or the Product Performance Department for conditions not covered by this bulletin. All drawings are shown for illustration purposes only and are not to scale. Adequate design and bracing of the walls, as well as compliance with these application instructions, are the responsibility of the architect, builder, applicator and painter.



WARNING: Drilling, sawing, sanding or machining wood products can expose you to wood dust, a substance known to the State of California to cause cancer. Avoid inhaling wood dust or use a dust mask or other safeguards for personal protection. For more information go to www.P65Warnings.ca.gov/wood.

GENERAL INFORMATION ON FINISHING AND ADHESIVES

EXTIRA[®]
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Various manufacturers in the following sections have provided their recommendations for using their products with Extira panels. JELD-WEN provides this information to prospective users who must independently determine the suitability of such materials for its purpose. It is the user's responsibility to test and qualify all materials the user intends to use on Extira panels. This document is not a guideline or direction meant to guarantee any result; it is strictly informational in nature. JELD-WEN, Inc. makes no warranties or representations, express or implied, as to the accuracy, completeness, or any other aspect of the information in this document and JELD-WEN, Inc. assumes no liability in connection with any use of the information. JELD-WEN, Inc. provides this document to you on the condition that you will make your own complete assessment of the information given, prior to using the material. JELD-WEN, Inc. has no knowledge of or control over your use of the information, and it is provided "as is" and without any warranty of any kind. Accordingly, JELD-WEN, Inc. excludes all implied warranties, including but not limited to any warranty of merchantability or fitness for a particular purpose and warranties to the effect that the use of this information will not infringe any patent, copyright or trademark of any third party.

Samples of Extira panels are available for your testing needs. Testing samples may be requested by email to samples@miratecextira.com or through the contact us form on miratecextira.com.

JELD-WEN, Inc. welcomes information from you about your experience with the use of these materials or any other in the secondary treatment of Extira. Feedback may be sent to marketing@miratecextira.com.

FINISHING:

Extira panels must be primed and painted or finished before use. Use a high quality exterior oil/alkyd solvent-based or acrylic latex primer system specifically designed for use on wood composite substrates. The final topcoat should be compatible with the primer system used. Ninety-degree (90°) edges should be eased where possible to improve paint coverage and to extend service life. Final qualification is the responsibility of the end user.

The companies listed below have tested paint systems for use with Extira panels. The following topcoats are not recommended by JELD-WEN, Inc. or most paint manufacturers because of short service life, poor protection against UV light and a higher potential for performance problems:

- Shake and shingle paints, clear coatings, flat oil/alkyd paints topcoats, and vinyl acetate (PVA) base paints.
- Transparent and semi-transparent stains.

FINISHING CONTACT INFORMATION

Please visit the company websites below for support and information:

Akzo Nobel Coatings, Inc.
akzonobel.com

Matthews Paint
matthewspaint.com

Ronan's Paint Corp.
ronanpaints.com

Axalta
axalta.com

One Shot, LLC.
1shot.com

Sherwin Williams
sherwin-williams.com

GENERAL INFORMATION ON FINISHING AND ADHESIVES

EXTIRA[®]
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ADHESIVES:

The following companies have tested Extira panels with the products listed below for the specific applications shown. Contact the manufacturer for final overlay compatibility, recommendation on specific usage, adhesive quantities and press conditions before using the product specified. Please verify all information with the finish and adhesive manufacturers to confirm validity.

EXTERIOR APPLICATIONS:

Glue Manufacturer	Glue System	Application
Ashland Performance Materials	Isoset WD3-A322/CX-47 (water based)	HPL
	Isogmp SP 5050D (moisture cure urethane)	HPL
Franklin International	Titebond II	Extira to Extira, wood veneer
	Titebond Heavy Duty Construction Adhesive (solvent based)	Extira to Extira
	Titebond Trowelable Construction Adhesive (solvent based)	Extira to Extira
	Titebond Premium Polyurethane Construction Adhesive	Extira to Extira
	Titebond 811 Advantage Adhesive	Extira to Extira
H.B. Fuller Company	RK3379001 (Precatalyzed PVAc)	HPL, Extira to Extira, and wood veneer
	UR0218MF (liquid moisture-cure urethane)	HPL, Extira to Extira
	NP2075T (hotmelt polyurethane reactive)	HPL, Extira to Extira, and wood veneer
National Casein	MB 330 (melamine powder)	wood veneer
	MUF 4301 (melamine powder)	wood veneer
	WP2271A/K4 (emulsion polymer w/catalyst)	wood veneer

INTERIOR APPLICATIONS:

Glue Manufacturer	Glue System	Application
Wilsonart Adhesives	WA 950/951 (Solvent contact adhesive)	Extira to HPL
	WA H2O (water basted contact adhesive)	Extira to HPL
	WA 3000 (PVA for postforming)*	Extira to HPL
	WA 3132 (Hot press PVA)*	Extira to HPL
National Casein	6500HV (cold press)	Extira to HPL
	3319-1 (cold press)	Extira to HPL
	PC2002 (cold press or hot press)	Extira to HPL

ADHESIVE CONTACT INFORMATION

Please visit the company websites below for support and information:

Ashland Performance Materials
ashland.com

H.B. Fuller Company
hbfuller.comr.com

Wilsonart Adhesives
wilsonart.com/adhesives-products

Franklin International
franklininternational.com

National Casein Company
nationalcasein.com

FIELD PAINTING BASICS:

- Step 1.** Sand all areas to be painted with 180 grit sandpaper and remove sanding dust. This is common for areas that have been cut, routed, or machined. All sharp and 90° edges should be rounded-off to avoid substrate chipping.
- Step 2.** Apply one coat with a brush, spray or roller with a high quality exterior alkyd-oil primer or acrylic latex primer, to a final thickness of 4 wet mils. Using a brush is the preferred method for adequate coverage. All freshly cut and routed edges (raised panel) should be double-coated to ensure a good seal. Dry time (cure) is likely to be within 48 hours, assuming ambient conditions are 50% RH and 77° F. Always follow the paint manufacturer's instructions for finishing.
- Step 3.** Lightly sand the primer coat with 220 grit sandpaper and remove sanding dust. Then, apply the first top coat with a high quality 100% acrylic latex top coat using a brush, spray or roller, typically at a rate of 4 wet mils. Allow at least 24 hours for the first top coat to dry before applying the second coat. Follow all paint manufacturer's recommendations.
- Step 4.** After the topcoat has dried, lightly sand the first top coat. Apply the second and final coat using the same 100% acrylic finish, typically, at a rate of 3 to 4 wet mils with a brush, spray or roller. Follow all paint manufacturer's recommendations.

A minimum field-applied dry film thickness of 4 mils is required on Extira.

If there is no oven or forced heat used in curing the various coats of paint, allow parts to air dry for 7 days before installation. The 7 day wait will ensure fingernail hardness of the paint and will avoid fingerprints. Wrap parts in clear polyethylene during shipping to prevent parts from sticking together or marring.

These recommendations are provided only as a guide for best results. Consult with your paint supplier for specific instructions based on the products you use and your end application.

SUGGESTED PAINT PRODUCTS

Sherwin-Williams[®]

Primers: A-100 Exterior Fast Dry Stain Blocking Alkyd Wood Primer
Multi-Purpose Latex Primer/Sealer
Fast Drying Interior/Exterior Oil-Based Primer

Paints: A-100 Exterior Latex Paint
SuperPaint Exterior Latex
Duration Exterior Acrylic

Valspar[®]

Primers: Valspar[®] All-Weather Exterior Primer Sealer
Valspar[®] All-Purpose Primer-Sealer

Paints: Valspar[®] Reserve Exterior Paint
Valspar[®] Duramax
Valspar[®] Storm Coat

Olympic[®] Paints

Primer: Olympic[®] IconTM Primer
Paint: Olympic[®] One Exterior
Olympic[®] Icon Exterior

Pittsburgh[®] Paints

Paint: Regency Exterior
Weather King[®] Exterior Acrylic Latex Paint
Wonder Shield[®] Exterior Acrylic Latex Paint

Benjamin Moore[®]

Primer: Fresh Start[®] Premium Exterior Primer
Fresh Start[®] Moorwhite[®] Exterior Wood Primer 100
Fresh Start[®] Multi-Purpose Latex Primer

Paint: Regal[®] Select Exterior High Build
Aura[®] Exterior Paint
ben Waterborne Exterior Paint

Behr[®]

Primer: Premium Plus[®] Exterior Multi-Purpose Surface Primer & Sealer
Paint: Behr Marquee[®] Exterior Paint & Primer Series
Premium Plus Ultra[®] Exterior Paint and Primer Series
Premium Plus[®] Exterior Paint

Dutch Boy[®]

Paint: Dura Weather[®] Maxbond™ Door & Trim Paint

Glidden[®]

Primer: Glidden[®] Interior/Exterior Gripper Primer/Sealer
Paint: Glidden[®] High Endurance[®] Plus Exterior
Glidden[®] Premium Collection Exterior House Paint
Glidden[®] Trim, Door & Furniture Exterior Paint



FINISHING:

For signs that require extremely high primer/surface adhesion, such as when using sand mask agents, use an exterior grade surface sealer before applying the prime coat. We suggest an oil-based polyurethane. For maximum surface strength results, use a high quality, solvent or oil-based primer with a surface sealer. Epoxy primers may also perform well. High quality water-based primers will provide long term performance, but are not recommended for applications requiring high primer-to-surface adhesion. If the creation of your sign requires the use of sand masking agents, use a low tack product with a rating around 2.2 lb/inch or less.

Be sure to follow the instructions that the sealer manufacturer provides for use. In general, we suggest that you do not let the sealer cure on the surface. It is important to have good surface penetration to achieve the best result. If there are areas of build-up, they should be lightly sanded before applying the primer application.

SEALERS	
SEALER MANUFACTURER	SEALER SYSTEM
ZAR	203 Gloss
	267 Satin
Harrison Paints	Dura Guard Alkyd Surface Sealer
Smith and Co. Epoxy Products	Multi Prime, Clear Penetrating Epoxy
Cargill Inc.	Dilulin (requires addition of metallic driers)

PRIMERS:

Contact the paint manufacturer for final topcoat compatibility with the selected primer system. Be sure to follow the paint manufacturer's instructions for use.

PRIMERS	
PAINT MANUFACTURER	PRIMER SYSTEM
One Shot, LLC	4411010 High Build Waterborne Primer
Matthews Paints	274 908SP White Epoxy Primer
	274 228SP E-Primer (low VOC)
Ronan Paints	Prime All — Waterborne Acrylic Primer/Stain Kill
	(2 coats recommended, water based)
Zinsser Co., Inc.	Cover-Stain Primer Sealer (oil based)
Harrison Paints	Versa-Seal Primer 249-88 (oil based)
	Versa-Seal Primer 248-88 (water based)

USING EXTIRA FOR SIGNS

Specific Sign Finishes

EXTIRA[®]
by JELD-WEN



Matthews Paint has provided the following instructions for specific sign finishes:

NON-SANDING SYSTEM

SANDING SYSTEM

CONVENTIONAL:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 908SP White Epoxy Primer mixed per directions. See MPC125 Technical Bulletin for mixing and spraying instructions.
3. Topcoat with conventional Satin MAP or conventional Gloss MAP per directions. See MPC102 Technical Bulletin for Satin MAP, or MPC100 for Gloss MAP.

LOW VOC:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 228SP E-Prime mixed per directions. See MPC126 Technical Bulletin for mixing and spraying instructions.
3. Topcoat with Low VOC Satin MAP or Low VOC Gloss MAP per directions. See MPC107 Technical Bulletin for Low VOC Satin MAP, or MPC106 for Low VOC Gloss MAP.

CONVENTIONAL:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 908SP White Epoxy Primer mixed per directions. See MPC125 Technical Bulletin for mixing and spraying instructions.
3. Apply two to three coats of 6001SP Polyester Primer Surfacer mixed per directions. See MPC169 Technical Bulletin for mixing and spraying instructions.
4. Sand the 6001SP to leveling. Final sand with a grit no coarser than 600 before applying a topcoat.
5. Topcoat with conventional Satin MAP or conventional Gloss MAP per directions. See MPC102 Technical Bulletin for Satin MAP, or MPC100 for Gloss MAP.

LOW VOC:

1. Tack off Extira with a clean tack cloth. Avoid using harsh solvents to clean Extira as the solvents may cause the substrate to swell.
2. Apply one to two coats of the 274 228SP E-Prime mixed per directions. See MPC126 Technical Bulletin for mixing and spraying instructions.
3. Apply two to three coats of 6001SP Polyester Primer Surfacer mixed per directions. See MPC169 Technical Bulletin for mixing and spraying instructions.
4. Sand the 6001SP to leveling. Final sand with a grit no coarser than 600 before applying a topcoat.
5. Topcoat with Low VOC Satin MAP or Low VOC Gloss MAP per directions. See MPC107 Technical Bulletin for Low VOC Satin MAP, or MPC106 for Low VOC Gloss MAP.

SANDMASK TAPES:

In general, use a tape with a low grip adhesive, such as a rating of 2.2 lb/inch. The following tapes have produced acceptable results. Test or qualify the tapes with Extira before making a sign. Final qualification is the responsibility of the end user.

SANDMASK TAPES

TAPE MANUFACTURER	PRODUCT
Avery Dennison	SF 100-128-S White Paint Mask
	SF 100-231-S Yellow Paint Mask

CONTACT INFORMATION

Please visit the company websites below for support and information:

3M
3m.com/industrialtapee

Cargill, Inc.
cargill.com

Matthews Paint
matthewspaint.com

Zar/UGL
zar.com

Avery Dennison Graphics & Reflective Products Division NA
averydennison.com

Harrison Paints
harrisonpaint.com

One Shot, LLC.
1shot.com

Zinsser Co., Inc.
zinsser.com

HartCo. Inc.
hartcoservice.com

LIMITED WARRANTY

Effective February 1, 2016 to Current

EXTIRA[®]
by JELD-WEN



Extira[®] Treated Exterior Panel Limited Warranty

This warranty is effective for all Extira Products¹ manufactured on or after February 1, 2016 for use in the United States and Canada. Any previous warranties will continue to apply to products sold under the Extira name prior to this date. For additional information, including care and maintenance information refer to www.miratecextira.com.

What This Warranty COVERS...

We warrant to the original owner² that if your Extira Product exhibits a defect in material or workmanship within ten (10) years of the date of original purchase, we will pay for the replacement of the Product, limited to the original purchase price of the failed Product according to the following schedule:

Up to and including the 1st anniversary of the purchase date (Year 1)	100%
Years 2	90%
Years 3	80%
Years 4	70%
Years 5	60%
Years 6	50%
Years 7	40%
Years 8	30%
Years 9	20%
Years 10	10%
After the 10th anniversary of the purchase date	0%

Transferability: This warranty is not transferable.

How to Get Assistance...

If you have a problem with your Extira Product, immediately upon discovery, contact the distributor or dealer from whom you purchased our product or contact us directly:

Mail: Extira Limited Warranty
909 Pinder Avenue
Grinnell, IA 50112

Phone: 888-594-3578

We can respond quickly and efficiently if you provide the following: a) date and location of purchase, b) how to contact you, c) the address where the product can be inspected, and d) a description of the apparent problem and the product (photographs are helpful).

What We Will Do...

Upon receiving your notification, we will send out an acknowledgement, usually within three business days of receipt to the contact identified. We will investigate your claim and will begin to take appropriate action within 30 days after receipt of notification. If your warranty claim is denied, we may charge an inspection fee for an onsite inspection that is required or requested by you.

If your claim is accepted, and we choose to repair or replace the product or a component of the product, the replacement product/component will be provided in the same specification as the original product. Replacement products, components and services are warranted for the balance of the original product or service warranty, or 90 days, whichever is longer.

What This Warranty Does Not Cover...

We are not liable for damage, product failure or poor product performance due to:

- Normal wear and tear, and natural weathering of surfaces or variations in the color or texture of field-finished coating; surface cracks that are less than 1/32" in width and/or 1" in length.
- Exposure to chemicals (e.g. brick wash), a harsh environment (e.g., airborne pollutants, or prolonged contact with or immersion in liquid water), or direct contact with soil.
- Misuse, abuse or failure to properly store, handle, finish and provide maintenance for the Product.
- Alteration or modification of the Product.
- Any cause beyond our reasonable control (e.g. fire, flood, earthquake, other acts of nature, and acts of third parties outside of our control).

- Problems related to: improper field finishing of all exposed surfaces and edges of the panel (See our Finishing Instructions at www.miratecextira.com); variation or unsatisfactory results in sheen or texture resulting from the field application of paint or any other coating material.
- Warp which does not exceed our manufacturing specifications.
- Warp or bowing on any true operational shutters (those fastened to a structure with hinges on only one side).
- Warp or bowing on decorative shutters when mechanically fastened at greater than 24" on center around the perimeter of each side.
- Flaws in structure design and construction; installation into a condition that exceeds product design standards and/or is not in compliance with building codes.
- Hardware or accessories that are not provided by us.

We are also not liable for:

- Cost for labor, removal or disposal of defective product(s), freight, taxes or any other charge related to a failed product, installation or finishing of replacement panels.
- Incidental or consequential damage. Some states/provinces do not allow the exclusion or limitation of incidental or consequential damages, so this may not apply to you.

Important Legal Information -- Please read this carefully. It affects your rights.

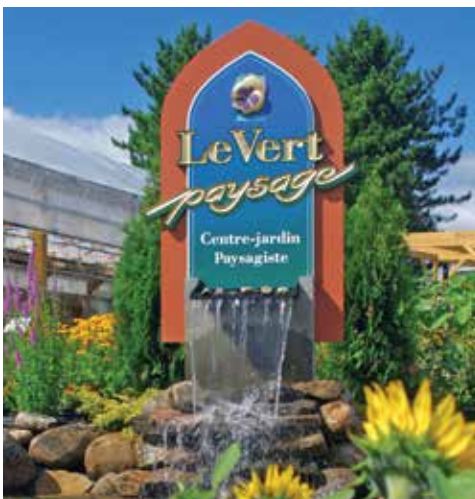
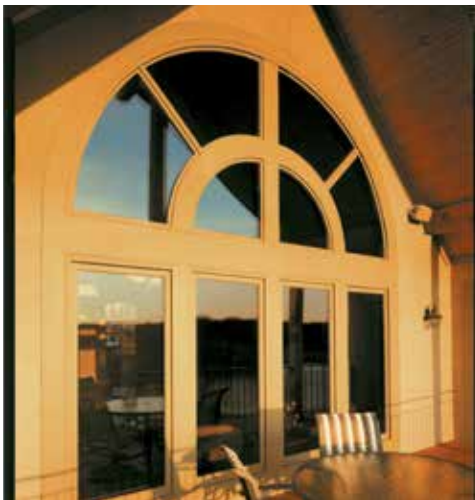
This Limited Warranty document sets forth our maximum liability for our products. We shall not be liable for special, indirect, consequential, or incidental damages. Your sole and exclusive remedy with respect to any and all losses or damages resulting from any cause whatsoever shall be as specified above. We make no other warranty or guarantee, either express or implied, including implied warranties of merchantability and fitness for a particular purpose to the original purchaser or to any subsequent user of the Product, except as expressly contained herein. In the event state or provincial law precludes exclusion or limitation of implied warranties, the duration of any such warranties shall be no longer than, and the time and manner of presenting any claim thereon shall be the same as, that provided in the express warranty stated herein. This Limited Warranty document gives you specific legal rights, and you may have other rights that vary from state/province to state/province.

Any dispute, controversy or claim arising out of or relating to this warranty, any alleged breach thereof, or the use or sale of the products to which this warranty applies shall be resolved by mandatory and binding arbitration administered by the American Arbitration Association in accordance with its commercial arbitration rules. Original purchaser agrees that they may assert claims against JELD-WEN in their individual capacity only, and not as a plaintiff or class member in any purported class action proceeding. The warranty provision herein shall be interpreted in accordance with the laws of Oregon (excluding Oregon's conflict of laws principles). If any provision of this warranty is held illegal or unenforceable in a judicial proceeding, such provision shall be severed and shall be inoperative, and the remainder of this warranty shall remain operative and binding on the Parties. Rejection of these dispute resolution provisions must be sent to JELD-WEN at the address provided herein within thirty (30) days of original purchaser's receipt of the Products to which this warranty applies.

No distributor, dealer or representative of Extira Products has the authority to change, modify or expand this warranty. The original purchaser of this Product acknowledges that they have read this warranty, understand it and are bound by its terms and agrees to provide this warranty to the original owner of the structure into which the Product is installed.

¹ "Extira Products" shall refer to exterior treated panels manufactured and marketed by JELD-WEN under the Extira brand name for use in the United States and/or Canada.

² This warranty extends to the original owner (original owner means the contractor/dealer/distributor/purchaser and the initial owner of the structure where the product is initially installed) and is not transferable. The original purchaser of this product acknowledges that they have read this warranty, understand it and are bound by its terms and agrees to provide this warranty to the original owner of the structure into which the product is installed. Should state or provincial law preclude no transferability, then the warranty period is effective as applicable up to ten (10) years from the date of initial purchase.



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