

<p style="text-align: center;">DEPARTMENT OF HOUSING AND URBAN DEVELOPMENT Housing - Federal Housing Commissioner</p> <p>TO: DIRECTORS, SINGLE FAMILY HOCs DIRECTORS, MULTIFAMILY HUBs</p>	<p>Series and Series Number: MATERIALS RELEASE NO: 1138e (Supersedes issue dated May 27, 1999)</p>
	<p>ISSUE DATE March 25, 2009</p>
	<p>REVIEW DATE March 25, 2012</p>
<p>SUBJECT: 1. Product Master Plank® Laminated Veneer Lumber</p> <p>2. Name and address of Manufacturer Finn Forest USA Engineered Wood Division 32205 Little Mack Avenue Roseville, MI 48066-0545</p>	

Data on the nonstandard product described herein have been reviewed by the Department of Housing and Urban Development (HUD) and determination has been made that it is considered suitable from a technical standpoint for the use indicated herein. This Release does not purport to establish a comparative quality or value rating for this product as compared to standard products normally used in the same manner.

This Materials Release cannot be used as an indication of endorsement or approval by HUD of the described product, and any statement or representation, however made, indicating such approval or endorsement by HUD is unauthorized. See Code 18, U.S.C. 709.

Any reproduction of this Release must be in its entirety.

USE: Beams, joists, lintels, rafters and general framing lumber.

DESCRIPTION:

MASTER PLANK laminated veneer lumber (LVL) is lumber manufactured by laminating Norway Spruce veneers with all grains parallel to the length of the member. The lumber is made in thicknesses from 3/4" (19mm) to 3 1/2" (89 mm), widths to 72" and lengths to 80'. The lumber is laminated in a continuous press.

The veneers are coated with an exterior type adhesive (phenol-formaldehyde) spread on one side and are fed into a press in the desired lay-up pattern. The press compresses the material to the required thickness and applies heat and pressure throughout the length of the press. The material moves through the press at a constant rate determined by the curing time required for a given thickness.

REQUIREMENTS:

MASTER PLANK LVL conforming to this Materials Release (MR) shall meet all of the requirements specified herein.

1. Glue:

Glue shall be a phenol-formaldehyde type resin which meets the requirements of ASTM D 2559, Specification for Adhesives for Structural Laminated Wood Products for Use Under Exterior (Wet Use) Exposure Conditions.

2. Veneers:

Veneers shall not exceed 1/8" (3.0 mm). Veneer joints shall be scarfed and staggered. The distance between joints shall be not less than 4" (101.6 mm). Knots shall be tight and the maximum size of knots shall be 2" (50.8 mm) in diameter.

3. Physical Properties:

Specific gravity	.45
Density	32 lb./cu. ft. average
Moisture content	12% max., at delivery

DESIGN AND ALLOWABLE STRESSES:

The performance and structural quality of the finished planks is assured by sampling and testing. The design practices for solid sawn lumber are applicable to MASTER PLANK LVL. The allowable unit stresses are as follows:

Property	Design Value (psi)
Modules of Elasticity (E)	2.0 (10) ⁶
Extreme Fiber Stress in bending (F _b)	2900*
Tension parallel to the grain (F _t)	2300
Compression	
parallel to the grain (F _{c11})	2700
perpendicular to the glue line (plank)	345
parallel to the glue line (joist)	870
Shear	
horizontal shear perpendicular to the glue line (joist)	320
horizontal shear parallel to the glue line (plank)	320

* For 12" depth. For depths other than 12", multiply by $(12/d)^{1/9}$ where d is the depth of the member in inches. The maximum value of F_b is 3050 psi. These values are subject to adjustment for duration of load.

Lateral nail holding and withdrawal values shall be as provided in the National Design Specification (NDS) for Wood Construction of the American Forest and Paper Association for Spruce-Pine-Fir sawn lumber. The holding power of bolts shall be as provided in NDS for Spruce-Pine-Fir.

INSTALLATION AND LIMITATIONS:

Installation shall be in strict accordance with HUD Minimum Property Standards (MPS) and accepted local codes for solid lumber construction, with the following limitations:

1. Nails installed parallel to the glue lines on the narrow face shall not be spaced any closer than 6" for 16 penny common nails, 4" for 10 penny common nails and 3" for 8 penny common nails.
2. MASTER PLANK is intended for dry service conditions where the maximum moisture content of the wood will not exceed 19%. MASTER PLANK shall not be used under wet conditions or exposed directly to the weather.

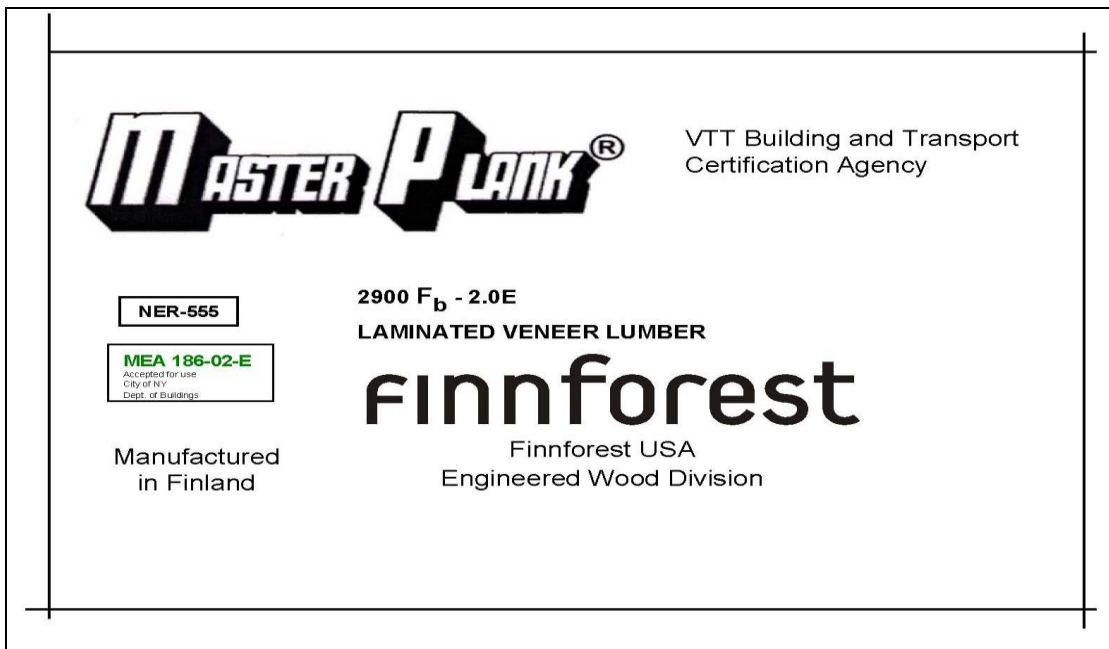
STORAGE AND HANDLING:

MASTER PLANK LVL shall be stored and handled in accordance with established recommendations for plywood.

CERTIFICATION AND IDENTIFICATION:

The manufacturer, FINN FOREST OY, Helsinki, Finland, shall certify that the MASTER PLANK laminated veneer lumber conforms to the requirements of this MR. The Technical Research Center of Finland, Helsinki, Finland and PFS Corporation shall validate the manufacturer's certification that the MASTER PLANK LVL meets the requirements of this MR. The test reports shall be made available for HUD inspection upon request.

Identification of Product Quality is evidenced by the following mark:



finnforest

Finnforest USA, Engineered Wood Division



PRODUCT WARRANTY

Finnforest USA warrants MASTER PLANK® Laminated Veneer Lumber to be free from any defects or errors due to faulty materials or workmanship in the manufacturing process in accordance with our specification.

We further guarantee that MASTER PLANK®, when correctly installed, will meet or exceed their design specifications for the normal life of the structure.

finnforest

Finnforest USA, Engineered Wood Division

A handwritten signature in black ink, appearing to read "James Gilleran".

James Gilleran, Managing Director, Finnforest USA, Engineered Wood Division

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MANUFACTURING PLANT(S):

The product covered under this MR will be produced at the following plant(s):*

MetsaLiitto Cooperative
Finn Forrest Kerto
1 Tehtaankatu
FI-08100 Lohja, Finland

MetsaLiitto Cooperative
Finn Forest Kerto
18 Tehtaantie
FI-58500 Punkaharju, Finland

The contact person for all matters concerning this Materials Release shall be:

Martti Tulkki
PH: 358-1046 56201
CellP 352-50 598 7277
Email: martti.tulkki@finnforest.com

WARRANTY:

Finn Forest, warrants MASTER PLANK LVL against faulty performance due to faulty materials or workmanship in the manufacturing process for a period of twenty (20) years from the date of installation.

The liability under this warranty of Finn Forest shall be limited to the replacement of any defective members and the cost of installation or, at the option of Finn Forest, payment of same in lieu thereof.

This warranty is limited and applies to any material failure due to the manufacturing of the LVL and does not extend, nor will the manufacturer be liable for any defects or damage due to misuse, improper installation or any damage resulting from fire, lightning or other causes beyond the manufacturer's control.

This manufacturer's warranty does not, in any way, relieve the builder of its responsibility under the terms of the builder's warranty required by the National Housing Act, or under any provisions applicable to any other programs. A copy of this warranty shall be furnished by the builder to the owner.

MANUFACTURER'S RESPONSIBILITIES:

Issuance of this Materials Release (MR) commits the manufacturer to fulfill, as a minimum, the following:

1. Produce, label and certify the material, product or system in strict accordance with the terms of this MR.

2. Provide necessary corrective action in a timely manner for all cases of justified complaint, poor performance or failure reported by HUD.
3. When requested, provide the FHA Standards, Office of Manufactured Housing Programs, HUD Headquarters, with a representative list of properties, in which the material, product or system has been used, including complete addresses or descriptions of locations and dates of installation.
4. Inform HUD in advance of changes in production facilities, methods, design of the product, company name, ownership or mailing address.

EVALUATION:

This MR shall be valid for a period of three years from the date of initial issuance or most recent renewal or revision, whichever is later. The holder of this MR shall apply for a renewal or revision 90 days prior to the Review Date printed on this MR. Submittals for renewal or revision shall be sent to:

U. S. Department of Housing and Urban Development
FHA Standards, Office of Manufactured Housing Programs
451 7th Street, SW, Room 9168
Washington, DC 20410-8000

Appropriate User Fee shall be sent to:

U. S. Department of Housing and Urban Development
Miscellaneous Income – Technical Suitability of Products Fees
Bank of America
P. O. Box 198762
Atlanta, GA 30384-8762

The holder of this MR may apply for revision at any time prior to the Review Date. Minor revisions may be in the form of a supplement to the MR.

If the Department determines that a proposed renewal or supplement constitutes a revision, the appropriate User Fee for a revision will need to be submitted in accordance with Code of Federal Regulations 24 CFR 200.934, "User Fee System for the Technical Suitability of Products Program," and current User Fee Schedule.

CANCELLATION:

Failure to apply for a renewal or revision shall constitute a basis for cancellation of the MR. HUD will notify the manufacturer that the MR may be canceled when:

1. conditions under which the document was issued have changed so as to affect production of, or to compromise the integrity of the accepted material, product, or system,
2. the manufacturer has changed its organizational form without notifying HUD, or
3. the manufacturer has not complied with responsibilities it assumed as a condition of HUD's acceptance.

However, before cancellation, HUD will give the manufacturer a written notice of the specific reasons for cancellation, and the opportunity to present views on why the MR should not be canceled. No refund of fees will be made on a canceled document.

This Materials Release is issued solely for the captioned firm, and is not transferable to any person or successor entity.
