

<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: 942i (Supersedes issue dated April 28, 2011)</p>
	<p>ISSUE DATE</p> <p>January 18, 2017</p>
	<p>REVIEW DATE</p> <p>January 18, 2020</p>
<p>SUBJECT: 1. Product Thermo-Ply Blue Laminated Paperboard</p> <p>2. Name and address of Manufacturer Ox Paperboard Michigan, LLC 700 Centerville Road Constantine, MI 49042</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: Wall sheathing.

DESCRIPTION:

Thermo-Ply Blue sheathing consists of laminated paperboard covered with aluminum foil or polyethylene, on one or both surfaces.

REQUIREMENTS:

The laminated paperboard shall be in compliance with Table 1.

Table 1 - Requirements for Thermo-Ply Blue Laminated Paperboard

Physical Properties	Values	Test Method
Thickness, in.	0.135	ASTM C 209
Vapor Tran., perms, max.	<0.6	ASTM E 96
Water Absorp, % max.	15.0	ASTM C 209
Tensile strength Parallel to surface, psi, min. MD* CD**	4617.0 2009.0	ASTM C 209
Tensile Strength Perpendicular to surface, psi, min.	1979.3	ASTM C 209
Linear expansion % max.	0.5	ASTM D 1037
Modulus of Rupture, psi, min. MD* CD**	4745.0 2561.0	ASTM C 209
Allowable Shear Resistance ^{1, 2, 3,}	210 plf	ASTM E 72 (dry)

*Machine Direction

**Cross Machine Direction

Notes:

1. Shear resistance allowances shown here are applicable for horizontal shear forces caused by wind and earthquake. The panels shall extend the full wall height and continuously span at least three studs.
2. All fasteners are to be galvanized.
3. Joints may be butted or lapped 3/4" min. with a single row of fasteners.
4. These values are based on a 2.5 safety factor applied to the average ultimate load.

INSTALLATION:

1. Panels shall be installed according to the manufacturer's instructions with 16 ga., 1.0" minimum crown staples with 1-1/4" legs, or 11 ga., 1-1/4" long roofing nails.

2. Panels shall be installed with the long dimension vertical with fasteners spaced 3" o.c. at the edges and 3" o.c. at the intermediate supports when used as a structural panel.
3. All nails and staples shall be driven flush with the surface. Nail heads and staple crowns shall not cut the surface of the panel.
4. Joints shall be butted or lapped, and shall occur over studs, plates, or solid blocking. Cut or trim with saw, knife, or router.
5. Thermo-Ply Blue Laminated paperboard panels shall not be used as a nail base. Nail siding to the studs, furring strips or other nailable surface.
6. Thermo-Ply Red panels (all facers) may be used for stucco applications with the addition of secondary water-resistive barrier with a performance at least equivalent to grade "D" building paper. Self-adhered flashing at least 25 mils thick and compatible to WRB system to be used for penetrations and non-vertical surfaces.
7. A vapor barrier of 0.6 perm or less shall be provided on the warm side of the wall covered with Thermo-Ply Blue, or else a vapor venting system to the outside shall be provided.
8. Panels may be used in fire rated exterior wall assemblies provided that they comply with the fire requirements of the local building code.
9. Minimum fastening for panels in nonstructural applications, shall be 11 ga. by 1-1/4" long galvanized roof-ing nails or 16 ga. staples with a 10." minimum crown staple and a 1-1/4" long leg, placed 6" o.c. at the panel edges and 12" o.c. at the intermediate supports.

CERTIFICATION AND LABELING:

Ox Paperboard Michigan, LLC certifies that Thermo-Ply Blue Sheathing covered by this release and, produced in conformance to this Materials Release (MR), is in compliance with a validation program at PFS, Inc. in accordance with the Code of Federal Regulations, 24 CFR 200.935. PFS shall inspect the manufacturer's facility every year at the plant to assure that the initially accepted quality control procedures are being followed. Sufficient samples of this product shall be selected and tested each year to validate the manufacturer's conformance to the requirements of this MR. Each piece of sheathing certified as conforming to this MR shall be labeled with the following information:

1. The PFS validation mark
2. The manufacturer's name
3. The manufacturer's conformance to this MR
4. Span rating

MANUFACTURING PLANT:

The product covered under this MR will be produced at the following plant:

Ox Paperboard Michigan, LLC
700 Centreville Road
Constantine, MI 49042
Robert Gest, Quality Assurance Manager
269-435-2425

WARRANTY:

Ox Paperboard Michigan, LLC warrants Thermo-Ply Blue panels against any defect due to faulty material and workmanship in the manufacturing process for a period of four (4) years from the date of installation.

The liability of Ox Paperboard Michigan, LLC on this warranty shall be limited to replacement of any defective panel and the cost of installation; or at the option of Ox Paperboard Michigan, LLC payment in lieu thereof.

The warranty applies to any material failure due to manufacture only and does not cover nor will the manufacturer be liable for any defect or damage due to misuse, improper installation, or damages resulting from fire, lightning or other unforeseen cause beyond the manufacturer's control. There are no warranties, which extend beyond the description of Thermo-Ply Blue contained in this document. In no event shall Ox Paperboard Michigan, LLC be liable for any incidental, consequential or proximate damage.

The manufacturer's warranty does not relieve the builder, in any way, of responsibility under the terms of the Builder's Warranty required by the National Housing Act or under any provisions applicable to any other housing program. A copy of the manufacturer's 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 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
Office of Manufactured Housing Programs
451 7th Street, SW, Room 9170
Washington, DC 20410-8000

Appropriate User Fee(s) for the TSP program can be submitted through the Pay.gov website at <https://pay.gov/public/form/start/73881741>

The holder of this MR may apply for revision at any time prior to the Review Date. Minor revision 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 this 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.
