



PRODUCT REPORT[®]

LP NovaCore[®] Thermal Insulated Sheathing **Louisiana-Pacific Corporation**

PR-N139(F)

Revised June 6, 2025

Product: LP NovaCore[®] Thermal Insulated Sheathing
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1. Basis of the product report:
 - 2023 Florida Building Code (FBC), Building: Sections 104.11 Alternative materials, design and methods of construction and equipment, and 2303.1.5 Wood structural panels
 - 2024, 2021, 2018, and 2015 International Building Code (IBC): Sections 104.2.3 (104.11 in 2021, 2018, and 2015 IBC) Alternative materials and 2303.1.5 Wood structural panels
 - 2024, 2021, 2018, and 2015 International Residential Code (IRC): Sections R104.2.2 (R104.11 in 2021, 2018, and 2015 IRC) Alternative materials
 - 2021 ANSI/AWC Special Design Provisions for Wind and Seismic (SDPWS) recognized in the 2023 FBC, Building, and 2024 and 2021 IBC
 - DOC PS 2-18, Performance Standard for Wood Structural Panels recognized in the 2023 FBC, Building and FBC, Residential, and 2024 and 2021 IBC and IRC
 - APA Reports T2022P-06, T2022P-13, T2023P-12, T2023P-13, and T2024P-10, and other qualification data
2. Product description:

LP NovaCore[®] Thermal Insulated Sheathing is an insulated sheathing made by combining 7/16 Category OSB with a layer of R-5 per inch XPS rigid foam insulation laminated to the OSB with a non-structural polyvinyl acetate (PVA) adhesive. The OSB complies with DOC PS 2 in accordance with the in-plant manufacturing standard approved by APA.

LP NovaCore Thermal Insulated Sheathing is available in nominal panel thicknesses of 15/16, 1-7/16, and 1-15/16 inches, and 4x8-foot, 4x9-foot, and 4x10-foot nominal panel sizes with square edges. The XPS specification and the PVA glue bond applications are specified in the in-plant manufacturing standard but are beyond the scope of the APA certification.
3. Design properties:

Tables 1A and 1B list the LP NovaCore Thermal Insulated Sheathing in-plane nominal unit shear capacities for engineering design in accordance with Section 2305 of the FBC, Building, Section 2305 of the IBC, and ANSI/AWC Special Design Provisions for Wind and Seismic (SDPWS) for wood structural panel shear walls unless otherwise specified in this report. Segments of the wall with openings shall not be counted as a shear wall.
4. Product installation:

LP NovaCore Thermal Insulated Sheathing recognized in this report shall be installed with the insulation direct to studs and used in accordance with *LP NovaCore[®] Thermal Insulated Sheathing Installation Instructions*, NC0005, dated September 2024.
5. Limitations:
 - a) LP NovaCore Thermal Insulated Sheathing is limited to dry service conditions that result in the average equilibrium moisture content of sawn lumber of less than 16%.
 - b) LP NovaCore Thermal Insulated Sheathing shall be covered with a water-resistive barrier on the exterior of the OSB sheathing in accordance with the code.

- c) An approved thermal barrier, such as minimum 1/2-inch gypsum wallboard, shall be installed on the interior side of the wall framing, opposite the LP NovaCore Thermal Insulated Sheathing, in accordance with Section R316.4 of the FBC, Residential, Section 2603.4 of the FBC, Building, or Section 2603.4 of the IBC.
 - d) Fire resistance of LP NovaCore Thermal Insulated Sheathing is beyond the scope of this report.
 - e) The nominal 1/2-inch thick (R-3), 1-inch thick (R-5), and 1-1/2-inch thick (R-7.5) XPS insulation is supplied by an XPS manufacturer in accordance with the in-plant manufacturing standard and its certification is beyond the scope of this report.
 - f) The use of LP NovaCore Thermal Insulated Sheathing for compliance with the High-Velocity Hurricane Zone (HVHZ) provisions of the FBC, Building, has not been evaluated and is outside the scope of this report.
 - g) The 7/16 Category OSB sheathing is manufactured at the LP facilities in Thomasville, Alabama (APA assigned plant number 520) and Peace Valley, British Columbia, Canada (APA assigned plant number 510), and certified by APA.
 - h) This report is subject to re-examination in one year.
6. Identification:
The NovaCore Thermal Insulated Sheathing described in this report is identified by a label bearing the manufacturer's name (Louisiana-Pacific Corporation) and/or trademark, the report number PR-N139, and a means of identifying the date of manufacture.

Table 1A. Nominal Unit Shear Capacities for Douglas fir-Larch Wood-Framed Shear Walls Sheathed with LP NovaCore Insulated Sheathing Using Standard Full-Round Head Nails^(a,b,c,d,e)

Nominal Panel Thickness (in.)	Min. Nail Penetration into Framing (in.)	Nail Size Length x Shank Dia. x Head Dia. (in.)	Nail Spacing Edge/Field (in.)	Nominal Unit Shear Capacity (lbf/ft)	Apparent Shear Stiffness, G_a (kips/in.)
15/16	1.5	2-1/2 x 0.131 x 0.281	3/12	840	9.6
			4/12	730	7.2
1-7/16	1.5	3 x 0.131 x 0.281	3/12	785	5.6
			4/12	685	5.1
1-15/16	1.5	3-1/2 x 0.131 x 0.281	3/12	730	3.2

For SI: 1 inch = 25.4 mm, 1lbf/ft = 14.59 N/m; 1 kips/in. = 175.13 kN/m

- a) For wind design, the ASD allowable shear capacity shall be determined by dividing the tabulated nominal shear capacity by the ASD reduction factor of 2.0 and the LRFD factored shear resistance shall be determined by multiplying the nominal shear capacity by a resistance factor, ϕ_D , of 0.80. No further increases shall be permitted.
- b) Values assume Douglas fir-Larch lumber at 19% or less moisture content at the time of fabrication.
- c) When species of framing lumber other than Douglas fir-Larch are used, reduce nominal unit shear capacity by multiplying the tabulated value by the Specific Gravity Adjustment Factor = $(1 - (0.50 - G)) \leq 1.0$, where G = specific gravity of the framing lumber from ANSI/AWC National Design Specification (NDS) for Wood Construction Table 12.3.3A.
- d) All panel edges shall be backed by framing or blocking, and nails shall be located approximately 3/8 inch from panel edges except at the corner of a brace wall line, in which the recommendation by the manufacturer shall be followed.
- e) Shear wall deflection shall be determined in accordance with SDPWS using the G_a value provided in this table.

Table 1B. Nominal Unit Shear Capacities for Douglas fir-Larch Wood-Framed Shear Walls
Sheathed with LP NovaCore Insulated Sheathing Using Nails with Offset Round
Heads^(a,b,c,d,e,f)

Nominal Panel Thickness (in.) ^(g)	Min. Nail Penetration into Framing (in.)	Nail Size Length x Shank Dia. (in.) x Min. Head Area Ratio (HAR) ^(g)	Nail Spacing Edge/Field (in.)	Nominal Unit Shear Capacity (lbf/ft)	Apparent Shear Stiffness, G_a (kips/in.)
15/16	1.5	2-1/2 x 0.131 x Y =8d	3/12	785	8.9
			4/12	685	6.7
1-7/16	1.5	3 x 0.131 x Y =8d	3/12	730	5.1
			4/12	645	4.7
1-15/16	1.5	3-1/2 x 0.131 x Y =8d	3/12	670	2.6

For SI: 1 inch = 25.4 mm, 1lbf/ft = 14.59 N/m; 1 kips/in. = 175.13 kN/m

- a) For wind design, the ASD allowable shear capacity shall be determined by dividing the tabulated nominal shear capacity by the ASD reduction factor of 2.0 and the LRFD factored shear resistance shall be determined by multiplying the nominal shear capacity by a resistance factor, ϕ , of 0.80. No further increases shall be permitted.
- b) Values assume Douglas fir-Larch lumber at 19% or less moisture content at the time of fabrication.
- c) When species of framing lumber other than Douglas fir-Larch are used, reduce nominal unit shear capacity by multiplying the tabulated value by the Specific Gravity Adjustment Factor = $(1-(0.50-G)) \leq 1.0$, where G = specific gravity of the framing lumber from NDS Table 12.3.3A.
- d) All panel edges shall be backed by framing or blocking, and nails shall be located approximately 3/8 inch from panel edges except at the corner of a brace wall line, in which the recommendation by the manufacturer shall be followed.
- e) Shear wall deflection shall be determined in accordance with SDPWS using the G_a value provided in this table.
- f) Offset round head nails included in ICC-ES Evaluation Report ESR-1539 and meet the Head Area Ratio (HAR) requirements of a nail having a shank diameter of at least 0.131 in. (e.g., Y =8d for an 8d common nail with a shank diameter of 0.131 in., or Y 135 for a nail having a shank diameter of 0.135 in.).

APA – The Engineered Wood Association is an approved national standards developer accredited by American National Standards Institute (ANSI). APA publishes ANSI standards and Voluntary Product Standards for wood structural panels and engineered wood products. APA is an accredited certification body under ISO/IEC 17065 by Standards Council of Canada (SCC), an accredited inspection agency under ISO/IEC 17020 by ANSI National Accreditation Board (ANAB), and an accredited testing organization under ISO/IEC 17025 by ANAB. APA is also an approved Product Certification Agency, Testing Laboratory, Quality Assurance Entity, Validation Entity, and Product Evaluation Entity by the State of Florida, and an approved testing laboratory by City of Los Angeles.

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