





www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

ICC-ES Listing Report ESL-1442

Reissued September 2023

This listing is subject to renewal September 2024.

CSI: DIVISION: 06 00 00—WOOD, PLASTICS AND COMPOSITES

Section: 06 16 13—Insulated Sheathing

Product Certification System:

The ICC-ES product-certification system includes evaluating reports of tests of standard manufactured product, prepared by accredited testing laboratories and provided by the listee, to verify compliance with applicable codes and standards. The system also involves factory inspections, and assessment and surveillance of the listee's quality system.

Product: DUPONT™ ARMORWALL PLUS AND DUPONT™ ARMORWALL SYMMETRICAL PANEL (SP) PLUS

STRUCTURAL INSULATED SHEATHING PANELS

Listee: DUPONT DE NEMOURS, INC.

Evaluation:

DuPont™ ArmorWall Plus Structural Insulated Sheathing panels consist of a Class 1 Rated polyurethane foam insulation layer that is fused directly to the rear face of a ½-inch (12.7 mm) thick sheathing layer. The sheathing layer is a Magnesium Oxide board facer. The insulation layer thicknesses are 1 ½-inch, 2 ¹/₄-inch, or 3 ¹/₄-inch (38.1 mm, 57.2 mm, or 82.6 mm) for the 2-inch, 2 ³/₄-inch, or 3 ³/₄-inch (50.8 mm, 69.9 mm, or 95.3 mm) overall sheathing nominal thicknesses, respectively. The DuPont™ ArmorWall Plus sheathing panels are attached directly to the base wall system, with the insulation layer facing inward, using minimum #14-13 DP1 fasteners with a maximum spacing of 12-inches (305 mm) on center along the perimeter and in the field. DuPont™ ArmorWall Plus contains a factory-applied coating on the exterior face of the sheathing layer.

DuPont™ ArmorWall SP Plus Structural Insulated Sheathing panels consist of a Class 1 Rated polyurethane foam insulation layer that is fused directly to the rear face of opposing ½-inch (12.7 mm) thick sheathing layers. The sheathing layers are a Magnesium Oxide board facers on each outer face. The insulation layer thicknesses are 1 ³/₄-inch, 2 ³/₄-inch, or 3 ¹/₄-inch (44.5 mm, 69.9 mm, or 82.6 mm) for the 2 ³/₄-inch, 3 ³/₄-inch, or 4 ¹/₄-inch (69.9 mm, 95.3 mm, or 108.0 mm) overall sheathing nominal thicknesses, respectively. The DuPont™ ArmorWall SP sheathing panel is attached directly to the base wall system using minimum #14-13 DP1 fasteners with a maximum spacing of 12-inches (305 mm) on center along the perimeter and in the field. DuPont™ ArmorWall SP Plus contains a factory-applied coating on the exterior face of the sheathing layer.

The DuPont™ ArmorWall Plus and DuPont™ ArmorWall SP Plus Structural Insulated Sheathing panels were evaluated based on testing in accordance with the following standards:

 NFPA 285 (-19 and -12), Standard Fire Test Method for the Evaluation of Fire Propagation Characteristics of Exterior Non-load-bearing Wall Assemblies Containing Combustible Components, National Fire Protection Association.



Findings:

Evaluation of DuPont™ ArmorWall Plus (2-inch, 2 ³/₄-inch, or 3 ³/₄-inch thick) and DuPont™ ArmorWall SP Plus (2 ³/₄-inch, 3 ³/₄-inch, or 4 ¹/₄-inch thick) Structural Insulated Sheathing panels, as components of the assembly, have met the performance criteria in accordance with NFPA 285 as described in the ICC Design Listing, and as referenced in the applicable sections of the following code editions:

 2021 and 2018 International Building Code® (IBC) Applicable Section: 2603.5.5

 2021 and 2018 International Residential Code® (IRC) Applicable Section: R301.1.3

Identification:

- 1. Product labeling shall include, the name of the report holder or listee, and the ICC-ES Listing Mark. The listing report number (ICC-ES ESL-1442) may be used in lieu of the ICC-ES Listing Mark. The DuPont™ ArmorWall Plus and DuPont™ ArmorWall SP Plus Structural Insulated Sheathing Panels described in this listing are identified by a label on the panel or packaging material bearing the DuPont de Nemours, Inc. name, product name, plant code or manufacturing address, other information to confirm standard compliance, and the ICC-ES Listing number (ESL-1442).
- 2. The report holder's contact information is the following:

DUPONT DE NEMOURS, INC. 1335 LITTON DRIVE SALISBURY, NORTH CAROLINA 28147 (844) 629-4968 www.dupont.com

Installation:

The DuPont™ ArmorWall Plus and DuPont™ ArmorWall SP Plus Structural Insulated Sheathing panels must be installed in accordance with the DuPont de Nemours, Inc's published installation instructions and applicable codes.

Conditions of Listing:

- 1. The listing report addresses only conformance with the standards and code sections noted above.
- 2. Approval of the product's use is the sole responsibility of the local code official.
- 3. The listing applies only to the materials tested and as submitted for review by ICC-ES.
- 4. Capacities of the supporting members and embedment of fasteners in the supporting member must be checked by a registered design professional as they may control the design.
- DuPont de Nemours, Inc's DuPont™ ArmorWall Plus and DuPont™ ArmorWall SP Plus Structural Insulated Sheathing panels are manufactured under a quality control program with inspections by ICC-ES.



ICC Design No. WPC-1442-01

ESL-1442

Reissued September 2023

This listing is subject to renewal September 2024.

www.icc-es.org | (800) 423-6587 | (562) 699-0543

A Subsidiary of the International Code Council®

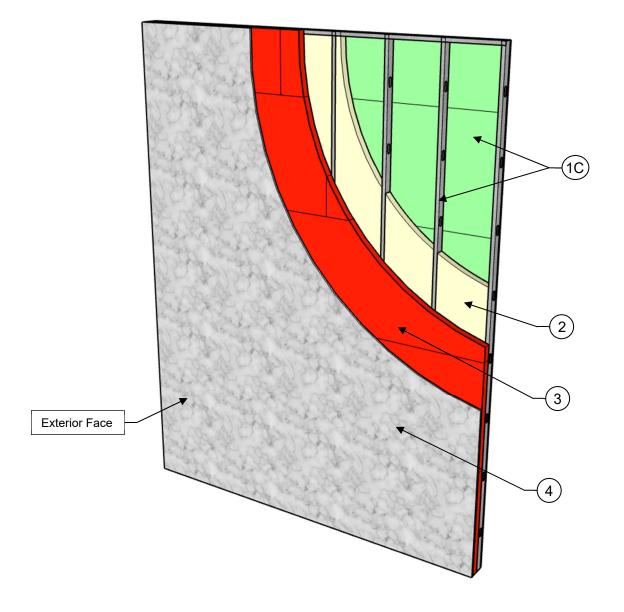
Applicant: DUPONT DE NEMOURS, INC.

Product: DUPONT™ ARMORWALL PLUS AND DUPONT™ ARMORWALL SP PLUS STRUCTURAL INSULATED

SHEATHING

Standard: NFPA 285

WPC = Wood, Plastics and Composites





COMPONENTS OF CONSTRUCTION:

WPC-1442-01 TABLE 1 – FOR COMPLIANCE WITH NFPA 285-19 & NFPA 285-12

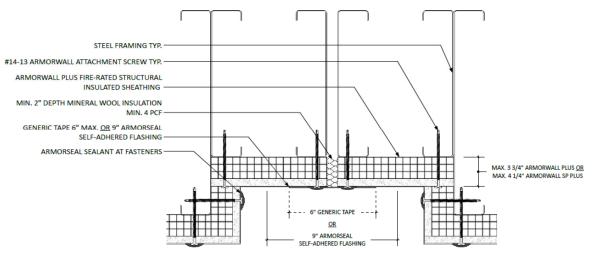
ITEM NO.	WALL COMPONENTS	MATERIALS
1	Base Wall System— Use either A, B, C or D	 A — Concrete wall B — Concrete masonry wall C — Cold-Formed Steel Studs (minimum 3 ⁵/₈-inch deep, minimum 20-gauge (37.5 mils), spaced maximum 24 inches on center, laterally braced every 4 feet vertically), with (1) layer of nominal ⁵/₈-inch thick Type X gypsum wallboard or (1) layer of ¹/₂-inch thick DuPont™ ArmorBoard on the interior side of the stud wall. D — FRT Wood Studs (minimum 2x4, spaced maximum 24 inches on center with (1) layer of nominal ⁵/₈-inch thick Type X gypsum wallboard or (1) layer of ¹/₂-inch thick DuPont™ ArmorBoard on the interior side of the stud wall.¹
	Floorline Firestopping (Not Shown)— Use A if 1A, 1B, or 1C System Use B if 1D System	 A – Non-combustible mineral wool safing (minimum density of 4.0 lbs./ft³) in each stud cavity and at each floorline. Mineral wool to be attached with z-clips or friction-fit into each stud cavity. B – Fire retardant treated (FRT) lumber (minimum 1 ½-inch thick).¹
2	Base Wall Cavity Insulation— Use either A, B, C, or D	 A — None B — Mineral wool insulation (faced or unfaced)². C — Fiberglass batt insulation, Class A (faced or unfaced)². D — Spray-applied foam plastic insulation, full stud depth or less thickness of Huntsman Building Solutions Heatlok® HFO Pro (Closed Cell) applied to Base Wall System 1C (See restriction below), covering the width of the stud cavity. Restriction: Where 2D is used with Base Wall System 1C, the Base Wall System shall be as follows: Cold-Formed Steel Studs (minimum 3 ⁵/₈-inch deep, minimum 18-gauge (50 mils), spaced maximum 24 inches on center, laterally braced every 4 feet vertically), with (1) layer of nominal ⁵/₈-inch thick Type X gypsum wallboard on the interior side of the stud wall. The perimeter of the base wall openings shall be framed with minimum 18-gauge (50 mils) steel stud C-channel.
3	Composite Exterior Sheathing³— Use either A or B	 A — DuPont™ ArmorWall Plus – maximum 3 ³/₄-inch thick sheathing panel installed vertically or horizontally and attached directly to the substrate with the insulation face inward. B — DuPont™ ArmorWall SP Plus – maximum 4 ¹/₄-inch thick sheathing panel installed vertically or horizontally and attached directly to the substrate. Note: DuPont™ ArmorSeal Sealant or 9-inch ArmorSeal Self-Adhered Flashing Tape used at all panel edges, seams, and fastener heads.
4	Exterior Cladding— Use A through U	 A — Brick —Standard nominally 4-inch thick clay brick with brick veneer anchors installed a maximum of 24 inches on center vertically. Maximum 2-inch air gap between composite exterior sheathing and brick. B — Stucco – Minimum ³/₄-inch thick, exterior cement plaster and lath. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the composite exterior sheathing and the lath. The secondary water-resistive barrier must not be full-coverage asphalt or butyl-based self-adhered membranes. C — Limestone – Minimum 2-inch thick, using any standard closed joint installation technique. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath/mortar when the cladding is adhered. D — Natural stone veneer – Minimum 2-inch thick, using any standard closed joint installation technique. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath/mortar when the cladding is adhered. E — Cast Artificial Stone – Minimum 1 ¹/₂-inch thick complying with ICC-ES AC51 (Adhered Manufactured Stone Masonry Veneer), using any standard closed joint installation technique. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath/mortar when the cladding is adhered. The secondary water-resistive barrier must not be full-coverage asphalt or butyl-based self-adhered membranes. F — Terracotta Cladding – Minimum 1 ¹/₄-inch thick, using any standard closed joint installation technique. G — Thin Brick / Cultured Stone - Minimum ³/₄-inch thick, set in thin-set adhesive and metal lath that has been tested in accordance with ASTM E119 (exterior cladding exposed to the furnace) and remained in place for a minimum of 30 minutes, or has successfully passed an NFPA 285 test. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath. The secondary water-resistive barrier must not be ful

ITEM NO.	WALL COMPONENTS	MATERIALS
		 K — Stone/Aluminum honeycomb composite building panels - Use any stone/aluminum honeycomb composite building panel system that has been successfully tested by the panel manufacturer and meets the requirements of the NFPA 285 test method. Installed using standard installation techniques. Evidence of testing in accordance with NFPA 285 and/or an ICC-ES report must be submitted to the code official as required. L — Autoclaved Aerated Concrete (AAC) panels – Use any AAC panel system that has been successfully tested by the panel manufacturer and meets the requirements of the NFPA 285 test method. Installed using standard installation techniques. Evidence of testing in accordance with NFPA 285 and/or an ICC-ES report must be submitted to the code official as required. M — Exterior Insulation Finishing System (EIFS) - Use any EIFS that has been successfully tested by the manufacturer and meets the requirements of the NFPA 285 test method. Installed using standard installation techniques. Evidence of testing in accordance with NFPA 285 and/or an ICC-ES report must be submitted to the code official as required. N — Terracotta Rainscreen Cladding – Minimum ½-inch thick rainscreen Terracotta with ventilated shiplap that has been successfully tested by the manufacturer and meets the requirements of the NFPA 285 test method. O — StonePeak Ceramic's Porcelain Tile Ventilated Façade System with Exposed Fastening (GHV System) (ESR-3793). P — Omnis 10 mm thick Petrarch Panel System with Concealed Fastening. The Base Wall System must include the following two features: Two TenMat VFB cavity fire barriers. The first shall be located 1 m above the window, and the second shall be located 3 m above the window. Minimum 5/8-inch thick gypsum wallboard flashing shall be secured around the window perimeter, with the exception of the sill. TunderMax 8 mm thick Max Compact Exterior F-Qualit
	Rough Opening Protection ⁴ (Not Shown)— Use A through D	 A — None B — Nominal ¹/₂-inch thick DuPont™ ArmorBoard attached with #14-13 by 4-inch long DP1 self-drilling screws, spaced maximum 2-inches from corners and maximum 12-inches on center to window studs, head and sill to line window opening, covering full depth of exterior wall. C — Minimum 0.040-inch thick aluminum or galvanized steel flashing installed at all openings to completely cover the opening header, jambs and sill. D — Minimum 1 ¹/₂-inch thick FRT wood installed at all openings to completely cover the opening header, jambs and sill.
	Panel-to-Panel Connection	Note: See WPC-1442-01 Figure 1

For **SI:** 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pcf = 16.01 kg/m^3 .

Footnotes:

⁴Rough Opening Protection options shown pertain to fire performance characteristics only. Requirements for opening flashing and waterproofing shall be in accordance with the manufacturer's published installation instructions and will not impact NFPA 285 fire performance.



WPC-1442-01 FIGURE 1 - PANEL-TO-PANEL CONNECTION DETAIL

¹Fire retardant treated (FRT) lumber must comply with 2021 or 2018 IBC Section 2303.2

²Insulation must comply with the applicable requirements of 2021 or 2018 IBC Section 720.2.

³Composite Exterior Sheathing must be installed with at a minimum #14-13 DP1 self-drilling screws spaced at a maximum 12 inches on center vertically on every stud. Insulation must comply with the applicable requirements of 2021 or 2018 IBC Section 720.2.

COMPONENTS OF CONSTRUCTION:

WPC-1442-01 TABLE 2 – FOR COMPLIANCE WITH NFPA 285-12 ONLY

ITEM NO.	WALL COMPONENTS	MATERIALS
1	Base Wall System— Use either A, B, C or D	 A — Concrete wall B — Concrete masonry wall C — Cold-Formed Steel Studs (minimum 3 ⁵/₈-inch deep, minimum 20-gauge (37.5 mils), spaced maximum 24 inches on center, laterally braced every 4 feet vertically), with (1) layer of nominal ⁵/₈-inch thick Type X gypsum wallboard or (1) layer of ¹/₂-inch thick DuPont™ ArmorBoard on the interior side of the stud wall. D — FRT Wood Studs (minimum 2x4, spaced maximum 24 inches on center with (1) layer of nominal ⁵/₈-inch thick Type X gypsum wallboard or (1) layer of ¹/₂-inch thick DuPont™ ArmorBoard on the interior side of the stud wall.¹
	Floorline Firestopping (Not Shown)— Use A if 1A, 1B, or 1C System Use B if 1D System	A – Non-combustible mineral wool safing (minimum density of 4.0 lbs./ft³) in each stud cavity and at each floorline. Mineral wool to be attached with z-clips or friction-fit into each stud cavity. B – Fire retardant treated (FRT) lumber (minimum 1 ½-inch thick).¹
2	Base Wall Cavity Insulation— Use either A, B, C, or D	 A — None B — Mineral wool insulation (faced or unfaced)². C — Fiberglass batt insulation, Class A (faced or unfaced)². D — Spray-applied foam plastic insulation, full stud depth or less thickness of Huntsman Building Solutions Heatlok® HFO Pro (Closed Cell) applied to Base Wall System 1C (See restriction below), covering the width of the stud cavity. Restriction: Where 2D is used with Base Wall System 1C, the Base Wall System shall be as follows: Cold-Formed Steel Studs (minimum 3 ⁵/₈-inch deep, minimum 18-gauge (50 mils), spaced maximum 24 inches on center, laterally braced every 4 feet vertically), with (1) layer of nominal ⁵/₈-inch thick Type X gypsum wallboard on the interior side of the stud wall. The perimeter of the base wall openings shall be framed with minimum 18-gauge (50 mils) steel stud C-channel.
3	Composite Exterior Sheathing ³ — Use either A or B	 A — DuPont™ ArmorWall Plus – maximum 3 ³/₄-inch thick sheathing panel installed vertically or horizontally and attached directly to the substrate with the insulation face inward. B — DuPont™ ArmorWall SP Plus – maximum 4 ¹/₄-inch thick sheathing panel installed vertically or horizontally and attached directly to the substrate. Note: DuPont™ ArmorSeal Sealant or 9-inch ArmorSeal Self-Adhered Flashing Tape used at all panel edges, seams, and fastener heads.
4	Exterior Cladding— Use A through X	 A — Brick —Standard nominally 4-inch thick clay brick with brick veneer anchors installed a maximum of 24 inches on center vertically. Maximum 2-inch air gap between composite exterior sheathing and brick. B — Stucco – Minimum ³/₄-inch thick, exterior cement plaster and lath. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the composite exterior sheathing and the lath. The secondary water-resistive barrier must not be full-coverage asphalt or butyl-based self-adhered membranes. C — Limestone – Minimum 2-inch thick, using any standard closed joint installation technique. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath/mortar when the cladding is adhered. D — Natural stone veneer – Minimum 2-inch thick, using any standard closed joint installation technique. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath/mortar when the cladding is adhered. E — Cast Artificial Stone – Minimum 1 ¹/₂-inch thick complying with ICC-ES AC51 (Adhered Manufactured Stone Masonry Veneer), using any standard closed joint installation technique. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath/mortar when the cladding is adhered. The secondary water-resistive barrier must not be full-coverage asphalt or butyl-based self-adhered membranes. F — Terracotta Cladding – Minimum 1 ¹/₄-inch thick, using any standard closed joint installation technique. G — Thin Brick / Cultured Stone - Minimum ³/₄-inch thick, set in thin-set adhesive and metal lath that has been tested in accordance with ASTM E119 (exterior cladding exposed to the furnace) and remained in place for a minimum of 30 minutes, or has successfully passed an NFPA 285 test. Dörken Systems Inc.'s Delta Dry & Lath may be installed between the exterior insulation and the lath. The secondary water-resistive barrier must not be ful

ITEM NO.	WALL COMPONENTS	MATERIALS
		 K — Stone/Aluminum honeycomb composite building panels - Use any stone/aluminum honeycomb composite building panel system that has been successfully tested by the panel manufacturer and meets the requirements of the NFPA 285 test method. Installed using standard installation techniques. Evidence of testing in accordance with NFPA 285 and/or an ICC-ES report must be submitted to the code official as required. L — Autoclaved Aerated Concrete (AAC) panels – Use any AAC panel system that has been successfully tested by the panel manufacturer and meets the requirements of the NFPA 285 test method. Installed using standard installation techniques. Evidence of testing in accordance with NFPA 285 and/or an ICC-ES report must be submitted to the code official as required. M — Exterior Insulation Finishing System (EIFS) - Use any EIFS that has been successfully tested by the manufacturer and meets the requirements of the NFPA 285 test method. Installed using standard installation techniques. Evidence of testing in accordance with NFPA 285 and/or an ICC-ES report must be submitted to the code official as required. N — Terracotta Rainscreen Cladding – Minimum ½-inch thick rainscreen Terracotta with ventilated shiplap that has been successfully tested by the manufacturer and meets the requirements of the NFPA 285 test method. O — StonePeak Ceramic's Porcelain Tile Ventilated Façade System with Exposed Fastening (GHV System) (ESR-3793). P — Parklex 8 mm thick Façade F Cladding with Exposed Fastening. Q — Steni 6 mm thick Stone Composite Panel. R — Omnis 5/16-inch thick Petrarch Panel System with Concealed Fastening. The Base Wall System must include the following two features: 3. Two TenMat VFB cavity fire barriers. The first shall be located 1 m above the window, and the second shall be located 3 m above the window. 4. Minimum 5/8-inch thick Max Compact Exterior F-Quality Wall Panel Cladding wit
	Rough Opening Protection ⁴ (Not Shown)— Use A through D	 A — None B — Nominal ¹/₂-inch thick DuPont™ ArmorBoard attached with #14-13 by 4-inch long DP1 self-drilling screws, spaced maximum 2-inches from corners and maximum 12-inches on center to window studs, head and sill to line window opening, covering full depth of exterior wall. C — Minimum 0.040-inch thick aluminum or galvanized steel flashing installed at all openings to completely cover the opening header, jambs and sill. D — Minimum 1 ¹/₂-inch thick FRT wood installed at all openings to completely cover the opening header, jambs and sill.
	Panel-to-Panel Connection	Note: See WPC-1442-01 Figure 1

For **SI:** 1 inch = 25.4 mm, 1 foot = 304.8 mm, 1 pcf = 16.01 kg/m³.

¹Fire retardant treated (FRT) lumber must comply with 2021 or 2018 IBC Section 2303.2

²Insulation must comply with the applicable requirements of 2021 or 2018 IBC Section 720.2.

³Composite Exterior Sheathing must be installed with at a minimum #14-13 DP1 self-drilling screws spaced at a maximum 12 inches on center vertically on every stud. Insulation must comply with the applicable requirements of 2021 or 2018 IBC Section 720.2.

⁴Rough Opening Protection options shown pertain to fire performance characteristics only. Requirements for opening flashing and waterproofing shall be in accordance with the manufacturer's published installation instructions and will not impact NFPA 285 fire performance.