

Stonewood Architectural Panels by Fiberesin
Interior Applications Technical Guidelines for Interior Wall Cladding

Product Guide Specification in CSI 3-Part Format

This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, as described in The Project Resource Manual—CSI Manual of Practice.

Stonewood is a solid phenolic thermally fused material comprised of multiple sheets of kraft fiber paper. These kraft papers can be FSC® certified and contain 16% or more post-industrial, recycled wood fiber content. FSC® certification provides third-party assurance that all wood fibers are from responsible sources. The Stonewood manufacturing facility has been BIFMA level® certified. Fiberesin offers a 100% post-consumer recycled Stonewood product with a Class B fire rating. This product is not FSC® certified.

Stonewood interior wall panel comes in standard thicknesses (1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 3/4", and 1"), and can be ordered in custom thicknesses as well. It is available in two fire ratings in surface flammability: Class A or Class B per ASTM E84.

The Execution section of this specification document should be carefully reviewed and edited if necessary by the Architect to meet the requirements of the project and local building codes. Coordinate this section with other specification documents and the drawings, and consult with a Stonewood local representative or Fiberesin customer service, if needed.

SECTION 074200

STONEWOOD (A SOLID PHENOLIC INTERIOR WALL CLADDING)

Hereafter Stonewood Interior is referred to as Stonewood.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Stonewood: Solid phenolic panels for interior wall cladding of commercial and institutional buildings.

1.2 RELATED SECTIONS

- A. Section 05: "Cold-Formed Metal Framing"
- B. Section 07: "Thermal Insulation"

1.3 REFERENCES

- A. ASTM D638 - 10 Standard Test Method for Tensile Properties of Plastics.
- B. ASTM D790 - 10 Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials.
- C. ASTM E84 - 12 Standard Test Method for Surface Burning Characteristics of Building Materials
- D. NEMA Standards Publication LD3-2005. High pressure decorative laminates.
- E. 2012 International Building Code, Chapter 14 Exterior Walls.

1.4 SUBMITTALS

- A. Comply with Section 01330 (01 33 00) - Submittal Procedures.
- B. Product Data: Submit manufacturer's printed product literature and specifications including fabrication and assembly.
- C. Samples: Submit manufacturer's standard 3"x3" samples of panel cladding materials representative of colors and texture.
- D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified

requirements and are suitable for intended application.

E. Warranty: Submit manufacturer's standard warranty.

F. Installation Instructions (descriptive manual)

Shop Drawings: Submit complete sets of fabrication/installation drawings including panel dimensions, thickness, location of joints, method of anchorage, number of anchors, supports, accessories etc.

1.5 QUALITY ASSURANCE

A. Manufacturer's Qualifications:

1. Sufficient plant facilities to provide quality and quantity of materials as required without delaying progress of the work.
2. Minimum of 40 years of experience in paper saturation of phenolic resin, and producing phenolic paper laminate.

B. Fabricator

1. Fabricated by the manufacturer, and/or
2. Contracted by the customer, minimum 5 years experience in fabrication work for the size and complexity of the projects

C. Installer

1. Proven professional installer with a minimum of 5 years of documented experience.
2. Approved by the manufacturer

1.6 DELIVERY, STORAGE, AND HANDLING

A. Delivery: Deliver materials in manufacturer's original unopened containers/packages, with labels clearly identifying product name, manufacturer, color/texture, and weight.

B. Storage:

1. Store materials in clean, dry area in accordance with manufacturer's instructions.
2. Keep package sealed until ready for use.

C. Handling:

1. Handle materials in accordance with manufacturer's instructions.
2. Protect materials during handling to prevent damage.

1.7. WARRANTY

A. Limited warranty: Fiberesin warrants that Stonewood shall be free from material defects for a period of 10 years. Refer to www.stonewoodpanels.com for details.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. Fiberesin Industries, Inc., PO Box 808, Oconomowoc, WI 53066. Phone: (262) 567-4427
Fax: (262) 567-4814, Web Site: www.fiberesin.com. Email: info@fiberesin.com.

2.2 INTERIOR STONEWOOD

A. Material: Solid phenolic laminate panel

B. Colors/Patterns: 200+

C. Finish: #60 Matte

D. Standard Size: 48"x96"

E. Panel Thickness: 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 3/4", and 1" (Other thickness available on request)

F. Panel Core: Standard black and natural (brown)

2.3 MINIMUM MATERIAL PROPERTIES

A. NEMA Requirements

Description	Test	NEMA Requirements			
Thickness			0.156"	0.250"	0.500"
Light Resistance	3.3	Slight Effect	Slight Effect	Slight Effect	Slight Effect
Cleanability/Stain Resistance	3.4	Unaffected by Reagents 1-10	No Effect	No Effect	No Effect
			Moderate Effect	Moderate Effect	Moderate Effect
Cleanability		Moderate 11-15	10	10	10
Resistance to Boiling Water	3.5	Cleanability 20	No Effect	No Effect	No Effect
Resistance to High Temperature	3.6	No Effect	No Effect	No Effect	No Effect
Ball Impact Resistance: Inches Drop	3.8	Slight effect	No Effect	No Effect	No Effect
Dimensional Change: Length (Machine Direction)	3.11	75"	90"+	96"+	96"+
Width (Cross Direction)					
		0.7% Maximum	0.50%	0.50%	0.50%
Wear Resistance: Wear values (cycles)	3.13	400 Minimum	700	700	700
Weight Per Unit Area			1.07	1.71	3.42
			Lbs/ft ²	5.2	8.35
			Kg/m ²		
Density (PCF)			82	82	82

B. Mechanical Properties

Property	NEMA Requirements	0.156"	0.250"	0.500"
Flexural Strength ASTM D-790				
MD (psi)	18,000	20,000	20,000	20,000
CD (psi)	12,000	16,000	16,000	16,000
Flexural Modulus ASTM D-790				
MD (psi)	1.6x10 ⁶	2.0 x 10 ⁶	2.0 x 10 ⁶	2.0 x 10 ⁶
CD (psi)	1.4x10 ⁶	1.5 x 10 ⁶	1.5 x 10 ⁶	1.5 x 10 ⁶
Tensile Modulus ASTM D-638				
MD (psi)	18,000	18,000	18,000	18,000
CD (psi)	12,000	13,000	13,000	13,000

C. Fire Resistance

	Product Type	
	Class A	Class B
Thickness	0.250"	0.250"
Flame Spread Index - ASTM E-84 (BLDG)	15	30
Smoke Developed Values - ASTM E-84 (BLDG)	10	105
Fire Rating (Standard Product is Class B)	A	B

D. Manufacturing Tolerance

Thickness (.156 to .375)	+/- .020
Thickness (above .375 to 1.000)	+/- .030
CNC Shaped size (Length -Width)	+/- .020
Drill Diameter	+/- .003
Drill Depth	+/- .020
CNC Hole to hole	+/- .020
CNC Hole to Edge (1 Oper)	+/- .020
CNC Hole to Edge (2 Oper)	+/- .030
Routing - (Slots Width and Length)	+/- .015
Routing - (Slots Depth)	+/- .020

2.4. ACCESSORIES (FASTENERS)

- A. Manufactured by approved supplier
- B. Designed to withstand the effects of dead load and accommodate hygrothermal expansion/contraction of the panel.

PART 3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

- A. Compliance: Comply with manufacturer's/fabricator's/supplier's product data, handling and installation instruction/manual, shop drawings, shipping container/package ticket identification, etc.

3.2. EXAMINATION

- A. Verify correct panels received including dimension, tolerance, color/texture
- B. Verify correct attachment system received for the specific project/job
- C. Verify all the documents including shop drawing and installation guidelines
- D. Verify installation conditions are satisfactory to receive work of this Section before the commencement.
- E. Verify substrate installation is complete, flat, and true to plane

3.3. PREPARATION

- A. Field Measurements: Verify prior to fabrication and installation of the cladding panel
- B. Protect surrounding areas and surfaces to preclude damage during work of this Section
- C. Lay out work before beginning installation as necessary for true, plumb, and aligned panel installations.
- D. Verify locations of joints and panel lengths.

3.4. INSTALLATION

- A. Conform to manufacturer's instructions and provisions of shop drawings.
- B. Conform to clips' instruction for installation of clips
- C. Install to allow hygro-thermal expansion/contraction
- D. Use appropriate techniques/tools to work with the panel
- E. Do not force to fit, do not bend, stretch/compress
- F. Make cutting and fitting neat, square, and true. Where required cut, de-burr edges, and clean filings from adjacent surfaces.
- G. Do not install damaged or questionable panels

3.5. FIELD QUALITY CONTROL

- A. Manufacturer's Field Service: Provide field services to ensure product installation is in accordance with manufacturer's/fabricator's/supplier's instructions and installation manual, shop drawings etc.

3.6. ADJUSTING

- A. Correct identified defects and irregularities
- B. Replace damaged, soiled, and discolored work

3.7. CLEANING

- A. Leave installation clean and free from residue and debris from work of this Section.

END OF SECTION