

SECTION 06 4219
THERMALLY FUSED LAMINATE PANELS

This Section specifies “Wilsonart® Thermally Fused Laminate (TFL) Panels produced by Wilsonart. TFL Panels are a key component of the Wilsonart Coordinated Surfaces program. When combined with Wilsonart’s vast array of high performance laminate offerings and edgebanding options, TFL panels complete a suite of products unmatched in the industry for coordinated color, pattern, and finish selections, and will satisfy virtually any residential or commercial need. Wilsonart is the largest and most-recognized manufacturer of laminates in the United States with a substantial presence in the global marketplace.

Wilsonart® TFL Panels are well suited for retail, hospitality, healthcare, educational, and contract furniture applications. Panel laminate surfaces provide good wear and resistance to stains and scratches. Additionally, urea-formaldehyde-free and moisture-resistant panel core options are available.

Wilsonart TFL Panels contribute to LEED-NC and LEED-CI points in several categories.

Section Editing: Informational notes will appear as “Editing Note” text boxes throughout this Section. Bracketed bold text will require a selection to be made or information to be inserted.

PART 1 - GENERAL

1.01 SECTION INCLUDES

EDITING NOTE: Revise listing to suit Project requirements.

- A. Thermally Fused Laminate (TFL) Panels.
- B. Edgebanding.

1.02 RELATED REQUIREMENTS

EDITING NOTE: Section listings below are common references and based on the broadly accepted CSI MasterFormat® for Section numbers and titles. Revise to suit requirements for particular project.

- A. Section 01 3000 - Submittals.
- B. Section 06 0620 - Decorative Plastic Laminate.
- C. Section 06 0630 - Decorative Plastic Laminate Resurfacing.
- D. Section 06 4116 - Plastic-Laminate-Clad Architectural Cabinets.
- E. Section 08 1423.16 - Plastic-Laminate-Faced Wood Doors.
- F. Section 10 2113.16 - Plastic-Laminate-Clad Toilet Compartments.
- G. Section 12 3530.13 - Kitchen Casework.
- H. Section 12 3623.13 - Plastic-Laminate-Clad Countertops.

1.03 REFERENCES

EDITING NOTE: Revise Reference Standards to suit Project requirements.

- A. Reference Standards:
1. ANSI A208.1: Particleboard.
 2. ANSI A208.2: Medium Density Fiberboard (MDF) For Interior Applications.
 3. ATCM: Airborne Toxic Control Measure.
 4. AWI: Architectural Woodwork Institute.
 5. AWS: Architectural Woodwork Standards.
 6. CARB: California Air Resources Board.
 7. CPA: Composite Panel Association.
 8. FSC: Forest Stewardship Council.
 9. LEED: Leadership in Energy and Environmental Design.
 10. NEMA LD-3: High Pressure Decorative Laminates.

1.04 SUBMITTALS

- A. Submit under provisions of Section 01 3000 - Submittals.
- B. Product Data: Submit the following:
1. Product data for each specified product. Include manufacturer's technical data sheets and published instructions.
 2. Safety Data Sheets (SDS).
- C. Shop Drawings: Fully dimensioned shop drawings showing layouts and components, including edge conditions, joinery, terminating conditions, substrate construction, and cutouts and holes. Include elevations, section details, and large scale details. Indicate color, pattern, and finish selections.
- D. Samples: Selection and verification samples for each color, pattern, and finish required.
- E. Quality Assurance Submittals:
1. Test Reports: Certified test reports showing compliance with specified performance characteristics and physical properties, if required.
 2. LEED Submittals: Applicable LEED documentation for potential credits specified in this Section.
- F. Maintenance Data: Manufacturer's published maintenance manual with closeout submittals.

1.05 REGULATORY REQUIREMENTS

- A. Composite Wood Products:
1. CARB ATCM for Composite Wood Products.

1.06 QUALITY ASSURANCE

A. Qualifications:

EDITING NOTE: Retaining the Composite Panel Association (CPA) option provides additional quality assurance measures for panel core materials, including sustainable design related certification programs with independent third party testing offered through the CPA to its members.

1. Manufacturer Qualifications: TFL Panels produced by a manufacturer with documented quality management and environmental management practices and procedures in place to ensure compliance with specified requirements. **[Panel core material producers are current members in good standing with the Composite Panel Association.]**
2. Fabricator Qualifications: Minimum of three years documented experience in fabricating thermally fused laminate panels similar in scope and complexity to this Project.
3. Installer Qualifications: Minimum of three years documented installation experience for projects similar in scope and complexity to this Project.

EDITING NOTE: Following two LEED paragraphs list potential credits according to LEED 2009 for New Construction & Major Renovations (LEED-NC) and LEED 2009 for Commercial Interiors (LEED-CI). Coordinate with designated Project LEED AP for credits applicable to Project.

B. LEED 2009 rating system potential credits:

1. **[LEED-NC] [LEED-CI]** MR Credit 4 - Recycled Content.
2. **[LEED-NC] [LEED-CI]** MR Credit 5 - Regional Materials.
3. **[LEED-NC] [LEED-CI]** MR Credit 6 - Rapidly Renewable Content.
4. **[LEED-NC] [LEED-CI]** MR Credit 7 - Certified Wood.
5. **[LEED-NC] [LEED-CI]** IEQ Credit 4.4 - Low-Emitting Materials - Composite Wood and Agrifiber Products.
6. LEED-CI IEQ Credit 4.5 - Low-Emitting Materials, Systems Furniture and Seating.

C. Mock-Up:

EDITING NOTE: Select mock-up size option. Delete entire paragraph if mock-up is not a Project requirement.

1. Install at Project site using acceptable products and manufacturer approved installation methods. Obtain Architect's acceptance for color, pattern, finish, fabrication, and installation standards.
2. Mock-Up Size: [] by [].
3. Mock-Up Size: Indicated on Drawings.
4. Mock-Up Location: **[Indicated on Drawings] [As directed by Architect]**.
5. Maintain mock-up during construction for fabrication and installation comparison. If required, remove and legally dispose of mock-up when no longer required.
6. Incorporation: If permitted by Architect, mock-up may be incorporated into as part of the completed Work.

1.07 DELIVERY, STORAGE, AND HANDLING

- A. Storage and Protection: Store plastic laminate and panel core materials protected from exposure to harmful weather conditions, at temperature and humidity conditions recommended by manufacturers. Store sheet materials flat on pallets or similar rack-type storage to avoid damage. Moisture content of panel core materials not to exceed 6 percent to 8 percent.

1.08 PROJECT CONDITIONS

- A. Environmental Requirements: Ensure appropriate acclimatization of TFL Panels prior to fabrication. Condition TFL Panels in the same environment for 48 hours prior to fabrication. Condition at approximately 75 deg F (24 deg C) and 45 percent to 55 percent relative humidity.
- B. Field Measurements: Verify actual measurements and openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays.

PART 2 - PRODUCTS

WILSONART CONTACT INFORMATION: Wilsonart, 2400 Wilson Place, Temple, TX 76503-6110. Tel. 254.207.7000, Toll-Free 800.433.3222, Fax 254.207.3209.
Website: www.wilsonart.com

2.01 MANUFACTURER

- A. Basis of Design: Wilsonart.

EDITING NOTE: Refer to the **Laminate Design Detail Page** on the Wilsonart website for complete information on laminate properties, including applicable sustainable design conformance standards, compliance with additional standards, physical performance properties, and available sheet sizes.

2.02 TFL PANEL PROPERTIES

- A. Laminate Composition: Melamine saturated decorative layers thermally fused to both core face surfaces with heat and pressure. Stain resistant surface with wear and scratch resistance.
- B. Panel Core Material: Composite panel product composed primarily of cellulosic materials and a bonding system, resulting in a durable and dimensionally stable substrate suitable for decorative laminate overlays.
- C. Sustainable Design Conformance Standards:
 - 1. CPA: Eco-Certified Composite (ECC) Sustainability Standard.
 - 2. CPA: Formaldehyde Emissions Grademark Certification Program. Certification attests compliance with CARB ATCM limitations.

2.03 TFL PANEL ASSEMBLIES

- A. Product: “Wilsonart® Thermally Fused Laminate Panels.”
- B. Laminate Component:
1. Laminate Conformance Standard: NEMA LD 3, Grade VGL.
 2. Finish: **[Textured Gloss - 07] [Soft Grain - 12] [Linearity - 18] [Fine Velvet Texture - 38] [Matte - 60] [Fine Grain - 78]**.
 3. Color and Pattern: [_____].

EDITING NOTE: If color and pattern are not specified in the subparagraph above, delete and select one of the following subparagraphs.

4. Color and Pattern: Specified in SCHEDULE Article of this Section.
5. Color and Pattern: Indicated on Drawings.
6. Color and Pattern: Selected from manufacturer's full range of available selections.

EDITING NOTE: TFL Panels are available with multiple core materials, including particleboard and medium density fiberboard. Moisture-resistant core is only available with medium density fiberboard. Default Grades specified are typical performance values. Other grades can be specified; refer to the Substrate Selection Technical Bulletin on the Wilsonart website for additional information. Selecting options for no added urea formaldehyde and CARB ATCM are necessary for sustainable design low-emitting material conformance.

- C. Panel Core Material: Particleboard **[with no added urea formaldehyde]**.
1. Conformance Standards: ANSI 208.1, Grade **[M-2]**. **[Compliant with CARB ATCM.]**
 2. Product Type and Thickness: **[Type 858 - 5/8 inch] [Type 875 - 3/4 inch] [Type 870 - 1 inch] [Type 878 - 1-1/8 inch]**. ± 0.008 inch dimensional tolerance.
 3. Panel Width: **[49 inches] [61 inches]** [_____]. ± 0.036 inch dimensional tolerance.
 4. Panel Length: **[97 inches] [121 inches] [145 inches]** [_____]. ± 0.080 inch dimensional tolerance.
- D. Panel Core Material: Medium density fiberboard **[with no added urea formaldehyde]**.
1. Conformance Standard: ANSI 208.2. Grade **[130]**. **[Compliant with CARB ATCM.]**
 2. Product Type and Thickness: **[Type 841 - 1/2 inch] [Type 845 - 3/4 inch]**. ± 0.008 inch dimensional tolerance.
 3. Panel Width: **[49 inches] [61 inches]** [_____]. ± 0.036 inch dimensional tolerance.
 4. Panel Length: **[97 inches] [121 inches] [145 inches]** [_____]. ± 0.080 inch dimensional tolerance.

- E. Moisture-Resistant Panel Core Material: Medium density fiberboard **[with no added urea formaldehyde]**.
1. Conformance Standard: ANSI 208.2. Grade **[130]**. **[Compliant with CARB ATCM.]**
 2. Product Type and Thickness: Type 885 - 3/4 inch. ± 0.008 inch dimensional tolerance.
 3. Panel Width: **[49 inches] [61 inches] [_____]**, ± 0.036 inch dimensional tolerance.
 4. Panel Length: **[97 inches] [121 inches] [145 inches] [_____]**, ± 0.080 inch dimensional tolerance.

2.04 DECORATIVE EDGE BANDS

- A. Edgeband Products: "Wilsonart® Edgeband."
1. Composition: ABS/PVC extruded fabrication.
 2. Width: Equal to or greater than panel thickness.
 3. Finish: **[Match TFL Panels] [Textured Gloss - 07] [Soft Grain - 12] [Linearity - 18] [Fine Velvet Texture - 38] [Matte - 60] [Fine Grain - 78]**.
 4. Color and Pattern: **[Match TFL Panels] [_____]**.

EDITING NOTE: If color, pattern, and finish selections are not specified above, delete and select from one of the following options.

5. Color and Pattern: Specified in SCHEDULE Article of this Section.
6. Color and Pattern: Indicated on Drawings.
7. Color and Pattern: Selected from manufacturer's full range of available selections.

2.05 FABRICATION

- A. Fabricate TFL Panels in shop, to greatest extent practicable, in sizes and shapes indicated according to approved shop drawings and manufacturer's published fabrication requirements.
- B. Provide holes and cutouts indicated on approved shop drawings. Use a router to create cutouts and complete by sanding all edges smooth.

PART 3 - EXECUTION

3.01 EXAMINATION

- A. Examine substrates and conditions that could adversely affect the work of this Section.
- B. Substrates must be sound, flat, smooth, and free from dust or other surface contaminants.
- C. Commencement of work will constitute acceptance of existing conditions and substrates to receive the work.

3.02 INSTALLATION

- A. Conformance Standard: Comply with AWI AWS as applicable to Project.
- B. Install TFL Panels plumb, level, and true according to approved shop drawings and manufacturer's published installation instructions. Shim as required during installation process.
- C. Attach TFL Panels to substrates as indicated on Drawings and approved shop drawings.

3.03 CLEANING AND PROTECTION

- A. Clean TFL Panels according to manufacturer's published care and maintenance instructions. Completely remove deleterious substances from finished surfaces.

3.04 SCHEDULE

OPTION: Color and Pattern Schedule may be inserted here if this option is chosen.
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END OF SECTION 06 4219