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## Product Guide Specification

Specifier Notes: This product guide specification is written according to the Construction Specifications Institute (CSI) 3-Part Format, including *MasterFormat*, *SectionFormat*, and *PageFormat*, as described in *The Project Resource Manual—CSI Manual of Practice, Fifth Edition*.

The section must be carefully reviewed and edited by the Architect to meet the requirements of the project and local building code. Coordinate this section with other specification sections and the Drawings. Delete all “Specifier Notes” after editing this section.

Section numbers and titles are from *MasterFormat 1995 Edition*, with numbers and titles from *MasterFormat 2004 Edition* in parentheses. Delete version not required.

### SECTION 06400 (06 40 00)

#### ARCHITECTURAL WOODWORK

Specifier Notes: This section covers the following SierraPine sustainable architectural woodwork materials:

**MDF panels** with a formaldehyde-free adhesive system:

1. “Arreis®”.
2. “Medex®”.
3. “Medité® FR”.
4. “Medité® II”.

**Particleboard panels** with no added urea formaldehyde:

1. “Encore™”.

**MDF moldings** with a formaldehyde-free adhesive system:

1. “Arreis®”.
2. “Medex®”.
3. “Medité® FR”.
4. “Medité® II”.

Consult SierraPine for assistance in editing this section for the specific application.

## **PART 1 GENERAL**

### **1.1 SECTION INCLUDES**

#### A. Sustainable Architectural Woodwork Materials:

Specifier Notes: Edit the following list for the specified materials.

1. MDF Panels:
  - a. Medium-density fiberboard (MDF) panels with a formaldehyde-free adhesive system.
  - b. Moisture-resistant, medium-density fiberboard (MDF) panels with a formaldehyde-free adhesive system.
  - c. Flame-retardant, medium-density fiberboard (MDF) panels with a formaldehyde-free adhesive system.
2. Particleboard Panels:
  - a. Particleboard panels with no added urea formaldehyde.
3. MDF Moldings:
  - a. Medium-density fiberboard (MDF) moldings with a formaldehyde-free adhesive system.

### **1.2 RELATED SECTIONS**

Specifier Notes: Edit the following list of related sections as required for the project. Include sections specifying products that incorporate SierraPine sustainable architectural woodwork materials. List other sections with work directly related to this section.

- A. Section 06220 (06 22 00) – Millwork (Millwork).
- B. Section 06250 (06 25 00) – Prefinished Paneling.
- C. Section 06260 (06 26 00) – Board Paneling.
- D. Section 06270 (10 57 23) – Closet and Utility Wood Shelving (Closet and Utility Shelving).
- E. Section 06410 (06 41 00) – Custom Cabinets (Architectural Wood Casework).
- F. Section 06415 (12 36 23.13) – Countertops (Plastic-Laminate-Clad Countertops).
- G. Section 06420 (06 42 00) – Paneling (Wood Paneling).
- H. Section 06430 (06 43 13) – Wood Stairs (Wood Stairs).
- I. Section 06440 (06 44 00) – Wood Ornaments (Ornamental Woodwork).
- J. Section 06450 (06 46 00) – Standing and Running Trim (Wood Trim).
- K. Section 08210 (08 14 00) – Wood Doors (Wood Doors).

- L. Section 08350 (08 35 00) – Folding Doors and Grilles.
- M. Section 09640 (09 64 00) – Wood Flooring.
- N. Section 09740 (09 74 00) – Flexible Wood Sheets.
- O. Section 09770 (09 77 00) – Special Wall Surfaces (Special Wall Surfacing).
- P. Section 10165 (10 21 13.16) – Plastic Laminate Toilet Compartments (Plastic-Laminate-Clad Toilet Compartments).
- Q. Section 10175 (10 21 13.23) – Particleboard Toilet Compartments.
- R. Section 10210 (08 91 00) – Wall Louvers (Louvers).
- S. Section 10225 (08 91 26) – Door Louvers.
- T. Section 10420 (10 14 16) – Plaques.
- U. Section 10430 (10 14 00) – Exterior Signage (Signage).
- V. Section 10440 (10 14 00) – Interior Signage (Signage).
- W. Section 10500 (10 51 00) – Lockers.
- X. Section 10550 (10 55 00) – Postal Specialties.
- Y. Section 10670 (10 56 00) – Storage Shelving (Storage Assemblies).
- Z. Section 12300 (12 30 00) – Manufactured Casework (Casework).
- AA. Section 12500 (12 50 00) – Furniture (Furniture).
- BB. Section 12600 (12 60 00) – Multiple Seating.
- CC. Section 12700 (12 59 00) – Systems Furniture.

### 1.3 REFERENCES

Specifier Notes: List standards referenced in this section, complete with designations and titles. This article does not require compliance with standards, but is merely a listing of those used.

- A. ANSI A208.1 – Particleboard, Mat-Formed Wood.
- B. ANSI A208.2 – Medium Density Fiberboard for Interior Use.
- C. ASTM D 1037 – Standard Test Methods for Evaluating Properties of Wood-Base Fiber and Particle Panel Materials.
- D. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials.

- E. Collaborative for High Performance Schools (CHPS).
- F. Composite Panel Association (CPA) Environmentally Preferable Product (EPP) Grademark Program.
- G. Scientific Certification Systems (SCS).

#### **1.4 SUBMITTALS**

- A. Comply with Section 01330 (01 33 00) – Submittal Procedures.
- B. Product Data: Submit manufacturer's product data.

Specifier Notes: Delete samples if not required.
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- C. Samples: Submit manufacturer's samples, minimum 6 inches by 9 inches.
- D. Manufacturer's Certification: Submit manufacturer's certification that materials comply with specified requirements and are suitable for intended application.
- E. Material Certifications: Submit material certifications.
- F. Warranty: Submit manufacturer's standard warranty.

#### **1.5 QUALITY ASSURANCE**

- A. Manufacturer's Qualifications: Manufacturer regularly engaged, for preceding 5 years, in manufacture of sustainable architectural woodwork materials of similar type to that specified.

#### **1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Delivery: Deliver materials to site in manufacturer's original, unopened containers and packaging, with labels clearly identifying product name and manufacturer.
- B. Storage:
  - 1. Store materials in clean, dry area indoors in accordance with manufacturer's instructions.
  - 2. Store materials on flat, level surface with adequate support to prevent sagging.
- C. Conditioning: Condition materials to final environment for 48 to 72 hours before installation and finishing.
- D. Handling: Protect materials during handling and installation to prevent damage.

## **PART 2 PRODUCTS**

### **2.1 MANUFACTURER**

- A. SierraPine, 3010 Lava Ridge Court, Suite 220, Roseville, California 95661. Toll Free (800) 676-3339. Phone (916) 772-3422. Fax (916) 772-3415. Website [www.sierrapine.com](http://www.sierrapine.com). E-mail [info@sierrapine.com](mailto:info@sierrapine.com).

Specifier Notes: The SierraPine sustainable architectural woodwork materials included in this guide specification may contribute to achieving LEED® Credits for:  
Materials and Resources: 4.1, 4.2, 5.1, 5.2, 7.  
Indoor Environmental Quality: 4.4.  
Consult SierraPine for more information regarding LEED® credits supported.

Specify SierraPine sustainable architectural woodwork materials required. Delete materials not required.

## 2.2 MDF PANELS WITH FORMALDEHYDE-FREE ADHESIVE SYSTEM

- A. Medium-Density Fiberboard (MDF) Panels: “Arreis”.
1. Material:
    - a. Wood Fiber: 100 percent post-industrial recycled wood residuals.
    - b. Binder: Formaldehyde-free adhesive system.
  2. Conformance: ANSI A208.2, industrial-grade MDF.
  3. Certifications:
    - a. SCS Certified: Post-industrial recycled wood fiber. No added formaldehyde.
    - b. CHPS Compliant: Section 01350 approved.
    - c. CPA Certified: Environmentally Preferable Product.

Specifier Notes: FSC-Certified wood is an option. Delete if not required. Consult SierraPine for more information.

- d. FSC Certified.

Specifier Notes: Specify panel thickness.

4. Panel Thickness: [1/4 inch] [5/16 inch] [9 mm] [3/8 inch] [12 mm] [7/16 inch] [1/2 inch] [9/16 inch] [5/8 inch] [11/16 inch] [3/4 inch] [13/16 inch] [7/8 inch] [15/16 inch] [1 inch] [1-1/16 inches] [1-1/8 inches] [1-1/4 inches] [Indicated on the Drawings].
  - a. Thickness Tolerance: Plus or minus 0.005 inch (0.127 mm), average from nominal or deviation from average.
5. Physical Properties, based on 3/4-Inch (19-mm) Thickness, ASTM D 1037, Part A:
  - a. Density: 48 pounds per cubic foot (769 kg/m<sup>3</sup>).
  - b. Internal Bond: 115 psi (0.79 N/mm<sup>2</sup>).
  - c. Modulus of Rupture: 4,800 psi (33 N/mm<sup>2</sup>).
  - d. Modulus of Elasticity: 480,000 psi (3,307 N/mm<sup>2</sup>).
  - e. Modulus of Hardness, Janka Ball: 1,000 pounds (454 kg).
  - f. Screw Holding: Required to pull 1-inch #10 sheet metal screw.
    - 1) Face: 225 pounds (102 kg).
    - 2) Edge: 175 pounds (79 kg).
  - g. Water Absorption: 8 percent average, 24-hour soak.
  - h. Thickness Swell: 5 percent average, 24-hour soak.

- i. Linear Expansion: 0.30 percent, dimensional change in length and width due to humidity change.
- j. Flame Spread Rating, ASTM E 84: Class C (3).
- k. Moisture Content: 4 to 6 percent average, oven-dry basis.
- l. Formaldehyde Emissions: As low as 0.01 ppm.

B. Medium-Density Fiberboard (MDF) Panels: "Medex".

- 1. Material:
  - a. Wood Fiber: 100 percent post-industrial recycled wood residuals.
  - b. Binder: Formaldehyde-free adhesive system.
- 2. Conformance: ANSI A208.2, industrial grade MDF.
- 3. Certifications:
  - a. SCS Certified: Post-industrial recycled wood fiber. No added formaldehyde.
  - b. CHPS Compliant: Section 01350 approved.
  - c. CPA Certified: Environmentally Preferable Product.

Specifier Notes: FSC-Certified wood is an option. Delete if not required. Consult SierraPine for more information.

- d. FSC Certified.

Specifier Notes: Specify panel thickness.

- 4. Panel Thickness: [9 mm] [3/8 inch] [12 mm] [7/16 inch] [1/2 inch] [9/16 inch] [5/8 inch] [11/16 inch] [3/4 inch] [13/16 inch] [7/8 inch] [15/16 inch] [1 inch] [1-1/16 inches] [1-1/8 inches] [1-1/4 inches] [Indicated on the Drawings].
  - a. Thickness Tolerance: Plus or minus 0.005 inch (0.127 mm), average from nominal or deviation from average.
- 5. Moisture Resistant: ASTM D 1037, 6-cycle accelerated aging test.
- 6. Physical Properties, Base on 3/4-Inch (19-mm) Thickness, ASTM D 1037, Part A:
  - a. Density: 48 pounds per cubic foot (769 kg/m<sup>3</sup>).
  - b. Internal Bond: 200 psi (1.38 N/mm<sup>2</sup>).
  - c. Modulus of Rupture: 6,000 psi (41.34 N/mm<sup>2</sup>).
  - d. Modulus of Elasticity: 600,000 psi (4,134 N/mm<sup>2</sup>).
  - e. Modulus of Hardness, Janka Ball: 1,200 pounds (545 kg).
  - f. Screw Holding: Required to pull 1-inch #10 sheet metal screw.
    - 1) Face: 350 pounds (159 kg).
    - 2) Edge: 275 pounds (125 kg).
  - g. Water Absorption: 5 percent average, 24-hour soak.
  - h. Thickness Swell: 3 percent average, 24-hour soak.
  - i. Linear Expansion: 0.30 percent, dimensional change in length and width due to humidity change.
  - j. Flame Spread Rating, ASTM E 84: Class C (3).
  - k. Moisture Content: 4 to 6 percent average, oven-dry basis.
  - l. Formaldehyde Emissions: As low as 0.01 ppm.

C. Medium-Density Fiberboard (MDF) Panels: "Medite FR".

- 1. Material:
  - a. Wood Fiber: 100 percent post-industrial recycled wood fiber.

- b. Binder: Formaldehyde-free adhesive system.
- 2. Conformance: ANSI A208.2, industrial grade MDF.
- 3. Certifications:
  - a. SCS Certified: Post-industrial recycled wood fiber. No added formaldehyde.
  - b. CHPS Compliant: Section 01350 approved.
  - c. CPA Certified: Environmentally Preferable Product.

Specifier Notes: FSC-Certified wood is an option. Delete if not required. Consult SierraPine for more information.

- d. FSC Certified.
- e. Guardian Fire Testing Laboratories, Inc: Certified Class 1 (A).
  - 1) Flame Spread: 20.
  - 2) Smoke Developed: 100.

Specifier Notes: Specify panel thickness.

- 4. Panel Thickness: [3/8 inch] [12 mm] [7/16 inch] [1/2 inch] [9/16 inch] [5/8 inch] [11/16 inch] [3/4 inch] [13/16 inch] [7/8 inch] [15/16 inch] [1 inch] [Indicated on the Drawings].
  - a. Thickness Tolerance: Plus or minus 0.005 inch (0.127 mm), average from nominal or deviation from average.
- 5. Physical Properties, Based on 3/4-Inch (19-mm) Thickness, ASTM D 1037, Part A:
  - a. Density: 48 pounds per cubic foot (769 kg/m<sup>3</sup>).
  - b. Internal Bond: 140 psi (0.96 N/mm<sup>2</sup>).
  - c. Modulus of Rupture: 4,500 psi (31 N/mm<sup>2</sup>).
  - d. Modulus of Elasticity: 550,000 psi (3,790 N/mm<sup>2</sup>).
  - e. Modulus of Hardness, Janka Ball: 950 pounds (431 kg).
  - f. Screw Holding: Required to pull 1-inch #10 sheet metal screw.
    - 1) Face: 230 pounds (104 kg).
    - 2) Edge: 185 pounds (84 kg).
  - g. Water Absorption: 14 percent average, 24-hour soak.
  - h. Thickness Swell: 6 percent average, 24-hour soak.
  - i. Linear Expansion: 0.30 percent, dimensional change in length and width due to relative humidity change from 50 to 80 percent.
  - j. Flame Spread Rating, ASTM E 84: Class A (1).
  - k. Moisture Content: 6 to 8 percent average, oven-dry basis.
  - l. Formaldehyde Emissions: As low as 0.01 ppm.

D. Medium-Density Fiberboard (MDF) Panels: "Medite II".

- 1. Material:
  - a. Wood Fiber: 100 percent post-industrial recycled wood residuals.
  - b. Binder: Formaldehyde-free adhesive system.
- 2. Conformance: ANSI A208.2, industrial-grade MDF.
- 3. Certifications:
  - a. SCS Certified: Post-industrial recycled wood fiber. No added formaldehyde.
  - b. CHPS Compliant: Section 01350 approved.
  - c. CPA Certified: Environmentally Preferable Product.

Specifier Notes: FSC-Certified wood is an option. Delete if not required. Consult SierraPine for more information.

- d. FSC Certified.

Specifier Notes: Specify panel thickness.

- 4. Panel Thickness: [9 mm] [3/8 inch] [12 mm] [7/16 inch] [1/2 inch] [9/16 inch] [5/8 inch] [11/16 inch] [3/4 inch] [13/16 inch] [7/8 inch] [15/16 inch] [1 inch] [1-1/16 inches] [1-1/8 inches] [1-1/4 inches] [Indicated on the Drawings].
  - a. Thickness Tolerance: Plus or minus 0.005 inch (0.127 mm), average from nominal or deviation from average.
- 5. Physical Properties, Based on 3/4-Inch (19-mm) Thickness, ASTM D 1037, Part A:
  - a. Density: 48 pounds per cubic foot (769 kg/m<sup>3</sup>).
  - b. Internal Bond: 150 psi (1.03 N/mm<sup>2</sup>).
  - c. Modulus of Rupture: 5,500 psi (37.9 N/mm<sup>2</sup>).
  - d. Modulus of Elasticity: 550,000 psi (3,790 N/mm<sup>2</sup>).
  - e. Modulus of Hardness, Janka Ball: 1,150 pounds (522 kg).
  - f. Screw Holding: Required to pull 1-inch #10 sheet metal screw.
    - 1) Face: 350 pounds (159 kg).
    - 2) Edge: 275 pounds (125 kg).
  - g. Water Absorption: 6.5 percent average, 24-hour soak.
  - h. Thickness Swell: 3.5 percent average, 24-hour soak.
  - i. Linear Expansion: 0.27 percent, dimensional change in length and width due to humidity change.
  - j. Flame Spread Rating, ASTM E 84: Class C (3).
  - k. Moisture Content: 6 percent average, oven-dry basis.
  - l. Formaldehyde Emissions: As low as 0.01 ppm.

### 2.3 PARTICLEBOARD PANELS WITH NO ADDED UREA FORMALDEHYDE

- A. Particleboard Panels: "Encore".
  - 1. Material:

Specifier Notes: Edit the following sentence as required. 100 percent post-consumer recycled wood residuals is an option. Consult SierraPine for more information.

- a. Wood Fiber: [100 percent post-industrial recycled wood residuals] [100 percent post-consumer recycled wood residuals].
- b. Binder: Urea formaldehyde-free adhesive system.

Specifier Notes: Edit the following sentence as required.

- 2. Conformance: ANSI A208.1, [Grade M3 Industrial] [Grade M2 Industrial].
- 3. Certifications:
  - a. SCS Certified: Post-industrial recycled wood fiber. No added urea formaldehyde.
  - b. CHPS Compliant: Section 01350 approved.



- c. CPA Certified: Environmentally Preferable Product.

Specifier Notes: FSC-Certified wood is an option. Delete if not required. Consult SierraPine for more information.

- d. FSC Certified.

Specifier Notes: Specify panel thickness.

- 4. Panel Thickness: [3/8 inch] [12 mm] [7/16 inch] [1/2 inch] [9/16 inch] [5/8 inch] [11/16 inch] [3/4 inch] [13/16 inch] [7/8 inch] [15/16 inch] [1 inch] [1-1/16 inches] [1-1/8 inches] [1-1/4 inches] [1-3/8 inches] [1-7/16 inches] [1-1/2 inches] [1-5/8 inches] [Indicated on the Drawings].
- 5. Dimensional Tolerances:
  - a. Thickness: Plus or minus 0.005 inch (0.127 mm).
  - b. Length and Width: Plus or minus 1/8 inch (3 mm).
  - c. Squareness: Plus or minus 1/8 inch (3 mm).
- 6. Physical Properties, Based on 3/4-Inch (19-mm) Thickness, Grade M3, ASTM D 1037:
  - a. Density: 47 pounds per cubic foot (753 kg/m<sup>3</sup>).
  - b. Internal Bond: 80 psi (0.55 N/mm<sup>2</sup>).
  - c. Modulus of Rupture: 2,393 psi (16.5 N/mm<sup>2</sup>).
  - d. Modulus of Elasticity: 398,900 psi (2,748 N/mm<sup>2</sup>).
  - e. Modulus of Hardness, Janka Ball: 500 pounds (227 kg).
  - f. Screw Holding: Required to pull 1-inch #10 sheet metal screw.
    - 1) Face: 247 pounds (112 kg).
    - 2) Edge: 225 pounds (102 kg).
  - g. Flame Spread Rating, ASTM E 84: Class C (3).
  - h. Moisture Content: Less than 8 percent.
  - i. Formaldehyde Emissions: As low as 0.01 ppm.

## 2.4 MDF MOLDINGS WITH FORMALDEHYDE-FREE ADHESIVE SYSTEM

Specifier Notes: Specify the SierraPine sustainable architectural woodwork material to be used for moldings. Consult SierraPine for more information.

- A. Medium-Density Fiberboard (MDF) Moldings: ["Arreis"] ["Medex"] ["Meditate FR"] ["Meditate II"].

Specifier Notes: Specify molding profile numbers. Refer to the SierraPine website, [www.sierrapine.com](http://www.sierrapine.com), for a listing of molding profile numbers.

- 1. Profile Numbers: [ \_\_\_\_\_ ] [Indicated on the Drawings].
- 2. Material:
  - a. Wood Fiber: 100 percent post-industrial recycled wood fiber.
  - b. Binder: Formaldehyde-free adhesive system.
  - c. Finish: Low VOC, water-based factory primer.

### **PART 3 EXECUTION**

Specifier Notes: Prepare PART 3 – EXECUTION of this guide specification for the specific application of the specified SierraPine sustainable architectural woodwork materials. Include text as required to properly specify the installation of the specific application incorporating the SierraPine MDF panels, particleboard panels, or MDF moldings.

**END OF SECTION**