



SECTION 06630

PLASTIC TRIM

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. PVC trim, moldings and accessories fabricated with recycled content.

1.2 RELATED SECTIONS

- A. Section 06600 - Plastic Fabrications.
- B. Section 06200 - Finish Carpentry.
- C. Section 06260 - Board Paneling.
- D. Section 06455 - Simulated Wood Trim.
- E. Section 09900 - Paints and Coatings.

1.3 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Submit manufacturer's product data including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods, including fastener types and nailing patterns.
- C. Samples: Submit verification samples for each profile specified, minimum 6 inches (150 mm) long, representing actual product and finish.

1.4 REFERENCES

- A. ASTM D570 - Standard Test Method for Water Absorption of Plastics
- B. ASTM D635 - Standard Test Method for Rate of Burning and/or Extent and Time of Burning of Plastics in a Horizontal Position
- C. ASTM D638 - Standard Test Method for Tensile Properties of Plastics
- D. ASTM D648 - Standard Test Method for Deflection Temperature of Plastics Under Flexural Load in the Edgewise Position
- E. ASTM D696 - Standard Test Method for Coefficient of Linear Thermal Expansion of

Plastics Between -30 degreesC and 30 degreesC with a Vitreous Silica Dilatometer

- F. ASTM D792 - Standard Test Method for Density and Specific Gravity (Relative Density) of Plastics by Displacement
- G. ASTM D5420 - Standard Test Method for Impact Resistance of Flat, Rigid Plastic Specimen by Means of a Striker Impacted by a Falling Weight (Gardner Impact)
- H. ASTM E84 - Standard Test Method for Burning Characteristics of Building Materials

1.5 QUALITY ASSURANCE

- A. Mock-Up: Provide a mock-up for evaluation of profiles, installation techniques and workmanship.
 - 1. Mock-up areas designated by Architect.
 - 2. Include mock-up for each profile combination indicated on Drawings.
 - 3. Do not proceed with remaining work until profile, installation techniques and workmanship are approved by Architect.
 - 4. Reinstall mock-up areas as required to produce work acceptable to Architect.
 - 5. Approved mock-ups may remain in the finished work.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Storage: Store products in manufacturer's unopened packaging until ready for installation.
- B. Store on flat, level surface in a cool area away from sources of extreme heat or fire.
- C. Protection: Coordinate work with other operations and installation of trim to avoid damage to installed materials.

1.7 PROJECT CONDITIONS

- A. Maintain environmental conditions within limits recommended by manufacturer for optimum results.
 - 1. Comply with manufacturer's written installation guidelines to accommodate thermal expansion and contraction.

1.8 WARRANTY

- A. Warranted to the original Owner under normal and proper use to be free of manufacturing defects for the lifetime of the installation including labor for the first two years after installation.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Kleer Lumber which is located at: 29797 Beck Road; Wixom, MI 48393; Toll Free 866-553-3770; Fax: 413-572-1729; E-mail wayne_sanderson@tapcoint.com; Web: www.kleerlumber.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 MATERIAL

- A. PVC Trim and Moldings: Expanded rigid cellular PVC material by Kleer Trimboard - Material shall be produced from PVC resins, recycled PVC and have an integral white color. Composite material is not acceptable.
- B. Physical Properties: PVC material with a small-cell microstructure.
1. Density: .55 grams per cubic centimeter.
 2. Flame Spread Index: 14; self extinguishing; will not burn once active flame source is removed.
 3. Recycled Content: Less than 10%
 4. Water Absorption: Less than or equal to 1 percent.
 5. Insect Resistant: Yes.
 6. Moisture, Rot and Mildew Resistant: Yes.
 7. Resistance to Cupping, Splitting, Delamination, and Warping: Yes.
 8. Direct Moisture Contact: Allowed.
 9. Direct Contact with Grade: Allowed.
 10. Direct Masonry Contact: Allowed.
 11. Thermodynamic: Linear expansion and contraction capabilities.
 12. Heat Forming: Allowed.
 13. Nonstructural and Non-Load Bearing: Utilize the same thickness to span ratios used for wood in non-load bearing applications.
 14. Paintable: Allowed with 100 percent acrylic paint and primer, if required by paint manufacturer; or coatings designed specifically for use on exterior vinyl products.
 15. Non-Yellowing: Yes.
 16. Environmental: Kleer sheets are extruded using low toxicity organotin heat stabilizers with minimal migration from PVC. Tin stabilizers added during formulation have minimal volatilization during normal processing conditions as well as under severe use conditions. Kleer sheet and Kleer PVC trim are free of conventional lead, barium, cadmium and zinc compounds and pose low risk to manufacturers, sheet processors, consumers and aquatic life. Materials are suitable for use where foods contact surfaces. Materials are recyclable.
 17. Variation in Component Length: Minus 0.00 inches, plus 1.00 inch.
 18. Variation in Component Width: Plus or minus 1/32 inch.
 19. Variation in Component Thickness: Plus or minus 1/32 inch.
 20. Variation in Component Edge Cut: Plus or minus 2 degrees.
 21. Variation in Density: Plus or minus 10 percent.
- C. Products:
1. Interior and Exterior Trim Boards: Kleer Trimboards.
 - a. Finish: Smooth.
 - b. Finish: Wood Grain.
 - c. Thickness: 5/8 inch (15.9 mm).
 - d. Thickness: 3/4 inch (19.05 mm).
 - e. Thickness: 15/16 inches (23.8 mm).
 - f. Thickness: 1-1/4 inches (31.8 mm).
 - g. Width: 2-1/2 inches (63.5 mm).
 - h. Width: 3-1/2 inches (88.9 mm).
 - i. Width: 4-1/2 inches (114.3 mm).
 - j. Width: 5-1/2 inches (139.7 mm).
 - k. Width: 7-1/4 inches (184.2 mm).
 - l. Width: 9-1/4 inches (235 mm).
 - m. Width: 11-1/4 inches (285.8 mm).
 - n. Width: 15-1/4 inches (387.4 mm).
 - o. Length: 18 feet (5486 mm).
 - p. Length: 20 feet (6096 mm).

2. Trimboards: Klear Trimboards with Nailing Flange Cutout
 - a. Use: Trimboard machined to accept window nailing flange, 18 foot (5486 mm) lengths.
 - b. Finish: Smooth.
 - c. Finish: Wood Grain.
 - d. Width: 3-1/2 inches (88.9 mm).
 - e. Width: 5-1/2 inches (139.7 mm).
 - f. Thickness: 15/16 inches (23.8 mm).
 - g. Length: 18 feet (5486 mm).
3. Trimboards: Konceal Trimboard.
 - a. Use: Trimboard machined to accept siding.
 - b. Finish: Smooth.
 - c. Finish: Wood Grain.
 - d. Thickness: 15/16 inches (23.8 mm).
 - e. Width: 3-1/2 inch (89 mm) width with 3/4 by 3/4 inch (19 mm by 19 mm) Konceal Edge.
 - f. Width: 5-1/2 inch (139.7 mm) width with 3/4 by 3/4 (19 mm by 19 mm) Konceal Edge.
 - g. Length: 18 feet (5486 mm).
4. Trimboards: Konceal Trimboard with Nailing Flange Cutout
 - a. Use: Trimboard machined to accept siding and window nailing flange.
 - b. Finish: Smooth.
 - c. Finish: Wood Grain.
 - d. Width: 3-1/2 inch (89 mm) width with 3/4 by 3/4 inch (19 mm by 19 mm) Konceal Edge.
 - e. Width: 5-1/2 inch (139.7 mm) width with 3/4 by 3/4 (19 mm by 19 mm) Konceal Edge.
 - f. Length: 18 feet (5486 mm).
5. Sheet: Klear Sheets.
 - a. Finish: Smooth.
 - b. Finish: Wood Grain.
 - c. Width: 4 feet (1219 mm).
 - d. Thickness: 1/4 inch (6.35 mm).
 - e. Thickness: 3/8 inch (9.5 mm).
 - f. Thickness: 1/2 inch (12.7 mm).
 - g. Thickness: 5/8 inches (15.9 mm).
 - h. Thickness: 3/4 inch (19 mm).
 - i. Thickness: 15/16 inches (23.8 mm).
 - j. Thickness: 1-1/4 inches (31.8 mm).
 - k. Length: 8 feet (2438 mm).
 - l. Length: 10 feet (3048 mm).
 - m. Length: 12 feet (3658 mm).
 - n. Length: 18 feet (5486 mm).
 - o. Length: 20 feet (6096 mm).
6. Beaded Sheet: KlearBeed.
 - a. Finish: Standard bead, 2 inches on center (50.8 mm).
 - b. Thickness: 1/2 inch (12.7 mm).
 - c. Width: 4 feet (1219 mm).
 - d. Length: 8 feet (2438 mm).
 - e. Length: 10 feet (3048 mm).
7. Beaded Board: KlearLok.
 - a. Finish: 2 bead wainscot/ceiling on one side with standard bead at 2-1/2 inches on center (63.5 mm); edge V (WP-4) on other side.
 - b. Thickness: 1/2 inch (12.7 mm).
 - c. Width: 3-1/4 inches (82.6 mm) face.
 - d. Width: 5 inches (127 mm) face.

- e. Length: 16 feet (4877 mm).
- 8. Edge and Center Beaded Board: KlearLok.
 - a. Finish: 2 bead wainscot/ceiling on one side with standard bead at 2-1/2 inches on center (63.5 mm); edge V (WP-4) on other side.
 - b. Thickness: 3/4 inch (19.1 mm).
 - c. Width: 6 inches (152.4 mm) face.
 - d. Length: 18 feet (5486.4 mm) face.
- 9. One-Piece Corner: Klear Corner.
 - a. Finish: Smooth.
 - b. Finish: Wood grain.
 - c. Width: 3-1/2 inches (88.9 mm).
 - d. Width: 5-1/2 inches (139.7 mm).
 - e. Thickness: 15/16 inches (23.8 mm).
 - f. Length: 10 feet (3048 mm).
 - g. Length: 20 feet (6096 mm).
- 10. One-Piece Corner: Klear Konceal Corner.
 - a. Finish: Smooth.
 - b. Finish: Wood grain.
 - c. Width: 3-1/2 inches (88.9 mm).
 - d. Width: 5-1/2 inches (139.7 mm).
 - e. Thickness: 15/16 inches (23.8 mm).
 - f. Length: 10 feet (3048 mm).
 - g. Length: 20 feet (6096 mm).
- 11. Post Wrap: KlearWrap.
 - a. Use: Post wrap with Snap-Lock joining system and moulding accessory kits to encase structural/non-structural posts.
 - b. 4 inch (102 mm) KlearWrap: Outside Dimensions: 4.5 inches by 4.5 inches (114 mm by 114 mm) by 8 feet (2438 mm) length.
 - c. 4 inch (102 mm) KlearWrap: Outside Dimensions: 4.5 inches by 4.5 inches (114 mm by 114 mm) by 10 feet (3048 mm) length.
 - d. 6 inch (152 mm) KlearWrap: Outside Dimensions: 6.5 by 6.5 inches (165 mm by 165 mm) by 8 feet (2438 mm) length.
 - e. 6 inch (152 mm) KlearWrap: Outside Dimensions: 6.5 by 6.5 inches (165 mm by 165 mm) by 10 feet (3048 mm) length.
 - f. 8 inch (203 mm) KlearWrap: Outside Dimensions: 7 inches by 7 inches (178 mm by 178 mm) by 10 feet (3048 mm) length.
- 12. Post Wrap: Moulding Accessory Kits for KlearWrap.
 - a. Outer Wrap: 4 inch (102 mm) by 5 inch (127 mm).
 - b. Outer Wrap: 4 inch (102 mm) by 7 inch (178 mm).
 - c. Outer Wrap: 4 inch (102 mm) by 12 inch (305 mm).
 - d. Outer Wrap: 6 inch (152 mm) by 5 inch (127 mm).
 - e. Outer Wrap: 6 inch (152 mm) by 7 inch (178 mm).
 - f. Outer Wrap: 6 inch (152 mm) by 12 inch (305 mm).
 - g. Outer Wrap: 8 inch (203 mm) by 5 inch (127 mm).
 - h. Outer Wrap: 8 inch (203 mm) by 7 inch (178 mm).
 - i. Outer Wrap: 8 inch (203 mm) by 12 inch (305 mm).
 - j. Bed Moulding Set for Outer Wrap: 4 inch (102 mm) wrap.
 - k. Bed Moulding Set for Outer Wrap: 6 inch (152 mm) wrap.
 - l. Bed Moulding Set for Outer Wrap: 8 inch (203 mm) wrap.
 - m. Base Cap Moulding Set: 4 inch (102 mm) wrap.
 - n. Base Cap Moulding Set: 6 inch (152 mm) wrap.
 - o. Base Cap Moulding Set: 8 inch (203 mm) wrap.
 - p. Crown Moulding Set: 4 inch (102 mm) wrap.
 - q. Crown Moulding Set: 6 inch (152 mm) wrap.
 - r. Crown Moulding Set: 8 inch (203 mm) wrap.

13. Mounting Blocks: KleerBlok.
 - a. Use: Exterior mounting blocks for light fixtures, utility meters and similar items.
 - b. Dimensions: 1-1/4 inches by 7 inches by 8 inches (31.8 mm by 165.1 by 203.2 mm).
 - c. Dimensions: 1-1/4 inches by 7-1/2 inches by 11-1/2 inches (31.8 mm by 190.5 by 292.1 mm).
 - d. Dimensions: 1-1/4 inches by 9 inches by 14 inches (31.8 mm by 228.6 by 355.6 mm).
 - e. Dimensions: 1-1/4 inches by 15-1/2 inches by 18 inches (31.8 mm by 393.7 by 457.2 mm).
 - f. Dimensions: 1-1/4 inches by 18 inches by 23-1/2 inches (31.8 mm by 457.2 by 596.9 mm).
14. Siding Starter Strip: KleerStart.
 - a. Use: Siding starter strip, 18 foot (5486 mm) lengths.
 - b. Dimensions: 3/4 by 5-1/2 inches (19 mm by 139.7 mm).
 - c. Dimensions: 3/4 by 7-1/2 inches (19 mm by 190.5 mm).
15. Moulding: KleerLok Moulding.
 - a. Use: To conceal ends of KleerLok and KleerBeed in long runs.
 - b. Dimensions: Size: 5/8 inches (15.9 mm) thick by 2-1/2 inches (63.5 mm) actual width, 16 foot (4877 mm) lengths.
16. Moulding: 2-3/4 inch Crown Moulding.
 - a. Use: Crown moulding to cover and enhance perpendicular joints between horizontal and vertical surfaces like walls and ceilings/soffits, 16 foot (4876.8 mm) lengths
 - b. Dimensions: 1/2 inch (12.7 mm) by 2-3/4 inches (69.9 mm)
17. Moulding: 3-5/8 inch Crown Moulding.
 - a. Use: Crown moulding to cover and enhance perpendicular joints between horizontal and vertical surfaces like walls and ceilings/soffits, 16 foot (4876.8 mm) lengths
 - b. Dimensions: 11/16 inch (17.5 mm) by 3-5/8 inches (92.1 mm)
18. Moulding: 4-5/8 inch Crown Moulding
 - a. Use: Crown moulding to cover and enhance perpendicular joints between perpendicular surfaces like walls and ceilings/soffits, 16 foot (4876.8 mm) lengths
 - b. Dimensions: 3/4 inch (19.1 mm) by 4-9/16 inches (115.9 mm)
19. Moulding: 5-1/4 inch Crown Moulding
 - a. Use: Crown moulding to cover and enhance perpendicular joints between perpendicular surfaces like walls and ceilings/soffits, 16 foot (4876.8 mm) lengths
 - b. Dimensions: 9/16 inch (14.3 mm) by 5-1/4 inches (133.4 mm)
20. Moulding: 7-1/2 inch Crown Moulding
 - a. Use: Crown moulding to cover and enhance perpendicular joints between perpendicular surfaces like walls and ceilings/soffits, 16 foot (4876.8 mm) lengths
 - b. Dimensions: 1 inch (25.4 mm) by 7-1/2 inches (190.5 mm)
21. Moulding: Bed Moulding
 - a. Use: Bed moulding to cover and enhance perpendicular joints between horizontal and vertical surfaces like walls and ceilings/soffits, 16 foot (4876.8 mm) lengths
 - b. Dimensions: 1-3/4 inch (44.5 mm) by 9/16 inches (14.3 mm).
22. Moulding: Rams Crown Moulding.
 - a. Use: Crown moulding to cover and enhance perpendicular joints between horizontal and vertical surface like walls and ceilings/soffits, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 1-7/16 inch (36.5 mm) by 2-1/16 inches (52.4 mm).

23. Moulding: Base Cap Moulding.
 - a. Use: Base Cap Moulding to cover and enhance base boards in trim installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 11/16 inch (17.5 mm) by 1-1/8 inches (28.58 mm).
24. Moulding: Brick Mould Casing.
 - a. Use: Brick mould Casing for door and window installations, 17 foot (5181.6 mm) lengths.
 - b. Dimensions: 1-1/4 inch (31.8 mm) by 2 inches (50.8 mm).
25. Moulding: J-Channel Brick Mould Casing
 - a. Use: Brick mould casing for door and window installations with integrated J-Channel to receive siding, 17 foot (5181.6 mm) lengths.
 - b. Dimensions: 1-1/4 inch (31.8 mm) by 2 inches (50.8 mm)
26. Moulding: Shingle Band Moulding.
 - a. Use: Shingle Band Moulding to complement trim installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 11/16 inch (17.5 mm) by 1-5/8 inches (41.28 mm).
27. Moulding: Quarter Round Moulding.
 - a. Use: Quarter Round Moulding to cover and enhance 90 degree joints in trim installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 3/4 inch (19.1 mm) by 3/4 inches (19.05 mm).
28. Moulding: Cove/Scotia Moulding.
 - a. Use: Cove/Scotia Moulding to cover and enhance 90 degree joints in trim installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 3/4 inch (19.1 mm) by 3/4 inches (19.05 mm).
29. Moulding: Wainscot Cap Moulding.
 - a. Use: A finishing cap for KlearLok and KlearBeed when used in wainscot applications, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 13/16 inch (20.6 mm) by 1-1/8 inches (28.58 mm).
30. Moulding: Drip Cap Moulding.
 - a. Use: Drip Cap Moulding for use with door and window installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 11/16 inch (17.5 mm) by 1-5/8 inches (41.3 mm).
31. Moulding: Rake Moulding.
 - a. Use: Rake Moulding for use on rake board installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 1-1/6 inch (27 mm) by 2 inches (50.8 mm).
32. Moulding: Sill Nosing.
 - a. Use: Sill Nosing for use with window installations, 16 foot (4876.8 mm) lengths
 - b. Dimensions: 1-1/2 inch (38.1 mm) by 1-1/4 inches (31.8 mm).
33. Moulding: Historical Sill #1.
 - a. Use: Historical profile sill nosing for use with window installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 1-1/2 inch (38.1 mm) by 1-1/4 inches (31.8 mm).
34. Moulding: Historical Sill #2.
 - a. Use: Historical profile sill nosing for use with window installations, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 2 inch (50.8 mm) by 1-3/4 inches (44.5 mm).
35. Moulding: Replacement Sill
 - a. Use: Sill and sill nosing for use with window installations, 10 foot (3048 mm) lengths.
 - b. Dimensions: 1-1/4 inch (31.8 mm) by 7-1/4 inches (184.2 mm)
36. Moulding: Water Table Moulding
 - a. Use: Water table moulding to shed water over the face of an exterior cladding product, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 2-3/4 inch (69.9 mm) by 2 inches (50.8 mm)

37. Moulding: Band Profile
 - a. Use: Band profile for use on walls or other surfaces as a decorative moulding, 16 foot (4876.8 mm) lengths.
 - b. Dimensions: 11/16 inch (17.4 mm) by 1-3/4 inches (44.5 mm)
38. Baluster Profile:
 - a. Use: Baluster for use as a pillar or column in a series supporting a rail, 12 foot (3658 mm) lengths.
 - b. Dimensions: 1-1/2 inch (38.1 mm) by 1-1/2 inches (38.1 mm)

2.3 ADHESIVES AND FILLERS

- A. Adhesive:
 1. Approved Product: Kleer Cellular PVC Adhesives.
 - a. Sandable and paintable.
 - b. 4-7 Minute Work Time Two-part Adhesive.
 - c. 20-25 Minute Work Time Two-part Adhesive.
 2. Approved Product: Kleer Cellular PVC Cement.
 - a. Color: Dries white.
 - b. Working time: 10 minutes.
 - c. Cure: 85 percent cure in 10 minutes. 100 percent cure in 24 hours.
- B. Joint sealant: For trimboard subject to expansion and contraction.
 1. Kleer Structural Sealant:
 - a. Expansion Capability: 100 percent joint movement.
 - b. Sandable and paintable.
 - c. Color: White.
 - d. Skins over in 30 minutes. Paintable with acrylic paint in 2 hours.
- C.
- D. Nail Hole Filler:
 1. Kleer Cellular PVC Nail Stick:
 - a. Sandable and paintable.
 - b. Color: Dries off-white to light grey.

2.4 FASTENERS

- A. General: Fasteners shall have sufficient tensile strength in the shaft to resist bending during linear expansion and contraction.
- B. Type: Provide the following fasteners.
 1. Cortex Fasteners as provided by Kleer Trimboard with integral Engineered Plugs made from Kleer Trimboards for a perfect match and long-term performance.
 2. Nails with smooth, thin shanks, blunt tips and full round heads (e.g.: wood siding nails, box nails) long enough to penetrate into the substrate a minimum of 1-1/2 inches (38 mm).
 3. Exterior grade, trim-head screws, minimum #7 gauge long enough to penetrate into the substrate a minimum of 1-1/2 inches (38 mm).
 4. Material: Hot dip galvanized.
 5. Material: Stainless steel.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.

- B. Prior to installation, verify governing dimensions of and condition of substrate.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Examine, clean, and repair as necessary any substrate conditions that would be detrimental to proper installation.
- C. Prepare surfaces using the methods recommended by Kleer Trimboard for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions. Comply with Kleer Trimboard Installation Guidelines recommended techniques.
 - 1. Comply with all terms necessary to maintain warranty coverage.
 - 2. Use trim details indicated on drawings.
- B. Cutting:
 - 1. Use conventional woodworking saws.
 - 2. Use carbide tipped blades designed to cut wood. Do not use fine-tooth metal-cutting blades.
 - 3. Avoid rough edges from cutting caused by: excessive friction, poor board support, worn saw blades or badly aligned tools.
- C. Drilling:
 - 1. Do not use bits made for rigid PVC.
 - 2. Avoid frictional build-up and remove shavings from the drill hole frequently as necessary.
 - 3. Drill with standard woodworking drill bits.
- D. Milling:
 - 1. Mill using standard milling machines used to mill lumber.
 - 2. Relief angle 20 to 30 degrees.
 - 3. Do not score material.
 - 4. Cutting speed to be optimized with the number of knives and feed rate.
- E. Routing:
 - 1. Rout using standard bits and the same tools used to rout lumber.
 - 2. Carbide tipped router bits recommended.
- F. Edge Finishing:
 - 1. Edges can be finished by sanding, grinding, or filling with traditional woodworking tools.
- G. Joints:
 - 1. Provide bevel or shiplapped joints for material subject to expansion and contraction. Do not use butt joints.
 - 2. Provide butt joints for corner units or T-joints, only.
- H. Heat Forming:
 - 1. Utilize convection air circulating oven, strip heater, or radiant heaters to heat material from both sides.
 - 2. Do not overheat material. Surface temperature shall not exceed 320 degrees

- F (160 degree C) for more than 10 minutes.
3. Secure pliable material around a template to obtain finished shape during cooling.
4. Cool with natural air circulation, fans or compressed air.

I. Thermal Expansion and Contraction:

1. Expansion and contraction of trim material will occur with changes in temperature. Using the appropriate quantity of the proper fasteners along the entire length of Kleer is essential to help minimize expansion and contraction.
2. Follow manufacturer's guidelines for required gap width between trim pieces.

J. Fastening:

1. Fasteners shall be hand nailed, power nailed, or screwed.
 - a. Power Nailing: Adjust nail gun to prevent excessive nailing pressure or overdriving the nail. Adjust for ambient and material temperatures.
2. Pre-drill material when installing in low temperatures.
3. Fasteners should be long enough to penetrate into a 1-1/2 inch (38 mm) solid wood substrate a minimum of 1-1/2 inch (38 mm).
4. Staples, small brads and wire nails must not be used as fastening members.
5. Fasten trim into a flat, solid wood substrate that is a minimum 1-1/2 inches (38 mm) thick. Do not fasten trim into hollow or uneven substrates.

K. Fastener Schedule:

1. Along Length of Board: Fasten at 16 inches (406.4 mm) on center, maximum.
2. Within Width of Board: 4 inches (101.6 mm) on center, maximum.
3. Distance from End of Each Board: Not more than 2 inches (50.8 mm).

L. Bonding:

1. Follow adhesive manufacturer's guidelines.
2. Glue joints shall be secured on each side of the joint to allow adequate bonding time.
3. Surfaces to be glued should be clean and dry and in complete contact with each other. Smooth surfaces shall be sanded and cleaned prior to bonding.
4. Use PVC adhesive when installing short runs of trim.

M. Finishing:

1. Correct dents and gouges before applying final coating.
2. Nail holes should be filled using Kleer Structural Sealant, Kleer Cellular PVC Adhesive or Kleer Nail Stick.
3. Provide paint materials and prepare surfaces as recommended by Kleer Trimboard Paint as specified in Section 09900.
4. Clean material with a light detergent and warm water. Stubborn stains may be removed with rubbing alcohol.

3.4 PROTECTION

- A. Protect installed materials until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION