

**Part 1            General**

**1.1                RELATED REQUIREMENTS**

- .1            Section 07 92 00 – Joint sealants

**1.2                REFERENCE STANDARDS**

- .1            American National Standards Institute (ANSI)
  - .1            ANSI A208.1-09, Particleboard.
  - .2            ANSI A208.2-09, Medium Density Fiberboard (MDF) for Interior Applications.
  - .3            ANSI/HPVA HP-1-10, Standard for Hardwood and Decorative Plywood.
- .2            ASTM International
  - .1            ASTM E1333-1, Standard Test Method for Determining Formaldehyde Concentrations in Air and Emission Rates From Wood Products Using a Large Chamber.
  - .2            ASTM D2832-92(R2011), Standard Guide for Determining Volatile and Nonvolatile Content of Paint and Related Coatings.
  - .3            ASTM D5116-10, Standard Guide For Small-Scale Environmental Chamber Determinations of Organic Emissions From Indoor Materials/Products.
- .3            Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
  - .1            Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0 (2009).
- .4            Canadian General Standards Board (CGSB)
  - .1            CAN/CGSB-71.20-M88, Adhesive, Contact, Brushable.
- .5            CSA International
  - .1            CSA B111-74(R2003), Wire Nails, Spikes and Staples.
  - .2            CSA O112.10-08, Evaluation of Adhesives for Structural Wood Products (Limited Moisture Exposure).
  - .3            CSA O121-08, Douglas Fir Plywood.
  - .4            CSA O141-05(R2009), Softwood Lumber.
  - .5            CSA O151-09, Canadian Softwood Plywood.
  - .6            CSA O153-M1980(R2008), Poplar Plywood.
  - .7            CAN/CSA-Z809-08, Sustainable Forest Management.
- .6            Forest Stewardship Council (FSC)
  - .1            FSC-STD-01-001-2004, FSC Principle and Criteria for Forest Stewardship.
- .7            Green Seal Environmental Standards (GS)
  - .1            GS-11-11, Paints and Coatings.
  - .2            GS-36-11, Commercial Adhesives.

- .8 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).
- .9 International Organization for Standardization (ISO)
  - .1 ISO 14040-2006, Environmental Management-Life Cycle Assessment - Principles and Framework.
  - .2 ISO 14041-98, Environmental Management-Life Cycle Assessment - Goal and Scope Definition and Inventory Analysis.
- .10 National Electrical Manufacturers Association (NEMA)
  - .1 ANSI/NEMA LD-3-05, High-Pressure Decorative Laminates (HPDL).
- .11 National Hardwood Lumber Association (NHLA)
  - .1 Rules for the Measurement and Inspection of Hardwood and Cypress 2011.
- .12 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber 2008.
- .13 South Coast Air Quality Management District (SCAQMD), California State, Regulation XI. Source Specific Standards
  - .1 SCAQMD Rule 1113-A2011, Architectural Coatings.
  - .2 SCAQMD Rule 1168-A2005, Adhesives and Sealants Applications.
- .14 Sustainable Forestry Initiative (SFI)
  - .1 SFI-2010-2014 Standard.

### **1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for architectural woodwork and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
  - .1 Indicate details of construction, profiles, jointing, fastening and other related details.
  - .2 Indicate materials, thicknesses, finishes and hardware.
  - .3 Indicate locations of service outlets in casework, typical and special installation conditions, and connections, attachments, anchorage and location of exposed fastenings.
- .4 Samples:
  - .1 Submit 1 sample of laminated plastic for colour selection.
- .5 Certifications: submit certificates signed by manufacturer certifying that materials comply with specified performance characteristics and physical properties.

#### **1.4 QUALITY ASSURANCE**

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .2 Sustainable Standards Certification:
  - .1 Certified Wood: submit listing of wood products and materials used in accordance with CAN/CSA-Z809 or FSC or SFI.
- .3 Plywood, particleboard, OSB and wood based composite panels to CSA and ANSI standards.

#### **1.5 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00 - Common Product Requirements with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
  - .1 Protect millwork against dampness and damage during and after delivery.
  - .2 Store millwork in ventilated areas, protected from extreme changes of temperature or humidity.
- .3 Storage and Handling Requirements:
  - .1 Store materials in dry location, indoors, off ground and in accordance with manufacturer's recommendations in clean, dry, well-ventilated area.
  - .2 Store and protect architectural woodwork from nicks, scratches, and blemishes.
  - .3 Replace defective or damaged materials with new.

### **Part 2 Products**

#### **2.1 MATERIALS**

- .1 Softwood lumber: unless specified otherwise, S4S, moisture content 19 % or less in accordance with following standards:
  - .1 CSA O141.
  - .2 CAN/CSA-Z809 or FSC or SFI certified.
  - .3 NLGA Standard Grading Rules for Canadian Lumber.
  - .4 AWMAC custom grade, moisture content as specified.
- .2 Machine stress-rated lumber is acceptable for all purposes.
- .3 Ensure manufacturing process adheres to Lifecycle Assessment (LCA) Standards to CSA Z760-94 Life Cycle Assessment.
- .4 Hardwood lumber: moisture content 19 % or less in accordance with following standards:
  - .1 National Hardwood Lumber Association (NHLA).
  - .2 CAN/CSA-Z809 or FSC or SFI certified.
  - .3 AWMAC custom grade, moisture content as specified.

- .5 Douglas fir plywood (DFP): to CSA O121, standard construction, CAN/CSA-Z809 or FSC or SFI certified.
- .6 Canadian softwood plywood (CSP): to CSA O151, standard construction, CAN/CSA-Z809 or FSC or SFI certified.
- .7 Hardwood plywood: to ANSI/HPVA HP-1, CAN/CSA-Z809 or FSC or SFI certified.
- .8 Fibreboard must contain less than 10% roundwood by weight, using weighted average over three months period at manufacturing locations.
- .9 Hardboard:
  - .1 To CAN/CGSB-11.3, CAN/CSA-Z809 or FSC or SFI certified.
- .10 MDF (medium density fibreboard) core: to ANSI A208.2, thickness specified in architectural plans, with 769 kg/m<sup>2</sup> surface mass balance
  - .1 Medium density fibreboard performance requirements to: ANSI A208.2.
- .11 Laminated plastic for flatwork: to NEMA LD3, Grade VGL, as specified in architectural plans
- .12 Laminated plastic backing sheet: Grade BK, minimum of 0.5 mm thick or same thickness and same colour as face laminate.
- .13 Laminated plastic liner sheet: Grade GP, colour white or colour as specified on architectural plans.
- .14 Nails and staples: to CSA B111.
- .15 Wood screws: type and size to suit application.
- .16 Sealant: in accordance with Section 07 92 00 - Joint Sealants
- .17 Laminated plastic adhesive:

## 2.2 FABRICATION

- .1 Set nails and countersink screws apply natural stained wood filler to indentations, sand smooth and leave ready to receive finish.
- .2 Shop install cabinet hardware for doors, shelves and drawers. Recess shelf standards unless noted otherwise.
- .3 Shelving to cabinetwork to be adjustable unless otherwise noted.
- .4 Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures.
- .5 Shop assemble work for delivery to site in size easily handled and to ensure passage through building openings.
- .6 Obtain governing dimensions before fabricating items which are to accommodate or abut appliances, equipment and other materials.
- .7 Ensure adjacent parts of continuous laminate work match in colour and pattern.
- .8 Veneer laminated plastic to core material in accordance with adhesive manufacturer's instructions. Ensure core and laminate profiles coincide to provide continuous support and bond over entire surface. Use continuous lengths up to 3000 mm. Keep joints 600 mm from sink cutouts.

- .9 Use straight self-edging laminate strip for flatwork to cover exposed edge of core material. Chamfer exposed edges uniformly at approximately 20 degrees. Do not mitre laminate edges.
- .10 Apply laminate backing sheet to reverse side of core of plastic laminate work.
- .11 Apply laminated plastic liner sheet where indicated and to interior of cabinetry.

### **2.3 FINISHING**

- .1 Finish in accordance with Section 09 91 23 - Interior Painting.

## **Part 3 Execution**

### **3.1 INSTALLATION**

- .1 Do architectural woodwork to Quality Standards of AWMAC.
- .2 Install prefinished millwork at locations shown on drawings.
  - .1 Position accurately, level, plumb straight.
- .3 Fasten and anchor millwork securely.
  - .1 Supply and install heavy duty fixture attachments for wall mounted cabinets.
- .4 Use draw bolts in countertop joints.
- .5 Scribe and cut as required to fit abutting walls and to fit properly into recesses and to accommodate piping, columns, fixtures, outlets or other projecting, intersecting or penetrating objects.
- .6 At junction of plastic laminate counter back splash and adjacent wall finish, apply small bead of sealant in accordance with Section 07 92 00 - Joint Sealants.
- .7 Fit hardware accurately and securely in accordance with manufacturer's written instructions.
- .8 Site apply laminated plastic to units as indicated.
  - .1 Adhere laminated plastic over entire surface.
  - .2 Make corners with hairline joints.
  - .3 Use full sized laminate sheets.
  - .4 Make joints only where approved or indicated by Departmental Representative.
  - .5 Slightly bevel arises.
- .9 For site application, offset joints in plastic laminate facing from joints in core.

### **3.2 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 11 - Cleaning.
  - .1 Clean cabinet work, millwork, outside surfaces, inside cupboards drawers

- .2 Remove excess glue from surfaces.

**3.3 PROTECTION**

- .1 Protect cabinet work and millwork from damage until final inspection.
- .2 Protect installed products and components from damage during construction.
- .3 Repair damage to adjacent materials caused by architectural woodwork installation.

**END OF SECTION**