

**SECTION 12 36 00  
COUNTERTOPS**

**PART 1 - GENERAL**

**1.1 DESCRIPTION**

- A. This section specifies casework countertops with integral accessories.
- B. Integral accessories include:
  - 1. Sinks with drains.

**1.2 RELATED WORK**

- A. Color and patterns of plastic laminate: SECTION 09 06 00, SCHEDULE FOR FINISHES.
- B. DIVISION 22, PLUMBING.

**1.3 SUBMITTALS**

- A. Submit in accordance with SECTION 01 33 23, SHOP DRAWINGS, PRODUCT DATA, AND SAMPLES.
- B. Shop Drawings
  - 1. Show dimensions of section and method of assembly.
  - 2. Show details of construction at 1/2 scale.
- C. Samples:
  - 1. 150 mm (6 inch) square samples each top.
  - 2. Front edge, back splash, end splash and core with surface material and booking.

**1.4 APPLICABLE PUBLICATIONS**

- A. Publications listed below form a part of this specification to the extent referenced. Publications are referenced in the text by the basic designation only.
- C. Composite Panel Association (CPA):
  - A208.1-09..... Particleboard
- D. American Society of Mechanical Engineers (ASME):
  - A112.18.1-05..... Plumbing Supply Fittings
  - A112.1.2-04..... Air Gaps in Plumbing System
- E. American Society for Testing and Materials (ASTM):
  - D256-06..... Pendulum Impact Resistance of Plastic
  - D570-98(R2005)..... Water Absorption of Plastics
  - D638-08..... Tensile Properties of Plastics
  - D785-08..... Rockwell Hardness of Plastics and Electrical Insulating Materials
  - D790-07..... Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
  - D4690-99(2005) ..... Urea-Formaldehyde Resin Adhesives
  - G21-96 (R2002) ..... Determining Resistance of Synthetic Polymeric Materials to Fungi

- F. Federal Specifications (FS):  
A-A-1936 .....Adhesive, Contact, Neoprene Rubber
- G. U.S. Department of Commerce, Product Standards (PS):  
PS 1-95 .....Construction and Industrial Plywood

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Particleboard: CPA A208.1, Grade 2-M-2.
- B. Plywood: PS 1, Exterior type, veneer grade AC not less than five ply construction.
- C. Adhesive
- For wood products: ASTM D4690, unextended urea resin or unextended melamine resin, phenol resin, or resorcinol resin.
- D. Fasteners:
- Metals used for welding same metal as materials joined.
  - Use studs, bolts, spaces, threaded rods with nuts or screws suitable for materials being joined with metal splice plates, channels or other supporting shape.
- E. Solid Polymer Material:
- Filled Methyl Methacrylic Polymer.
  - Performance properties required:

Property	Result	Test
Elongation	0.3% min.	ASTM D638
Hardness	90 Rockwell M	ASTM D785
Gloss (60° Gordon)	5-20	NEMA LD3.1
Color stability	No change	NEMA LD3 except 200 hour
Abrasion resistance	No loss of pattern Max wear depth 0.0762 mm (0.003 in) - 10000 cycles	NEMA LD3
Water absorption weight (5 max)	24 hours 0.9	ASTM D-570
Izod impact	14 N·m/m (0.25 ft-lb/in)	ASTM D256 (Method A)
Impact resistance	No fracture	NEMA LD-3 900 mm (36") drop 1 kg (2 lb.) ball
Boiling water surface resistance	No visible change	NEMA LD3
High temperature resistance	Slight surface dulling	NEMA LD3

3. Cast into sheet form and bowl form.
4. Color throughout with subtle veining through thickness.
5. Joint adhesive and sealer: Manufacturers silicone adhesive and sealant for joining methyl methacrylic polymer sheet.
6. Bio-based products will be preferred.

## **2.2 SINKS**

- A. Sinks of Methyl Methacrylic Polymer:
  1. Minimum 19 mm (3/4 inch) thick, cast into bowl shape with overflow to drain.
  2. Provide for underhung installation to countertop.
  3. Provide openings for drain.

## **2.3 TRAPS AND FITTINGS**

- A. Material as specified in DIVISION 22, PLUMBING.
- B. Methyl Methacrylic Polymer Sink Traps:
  1. Cast or wrought brass with flat grid strainer, off-set tail piece, adjustable 38 x 32 mm (1-1/2 x 1 1/4-inch) P trap.
  2. Chromium plated finish.

## **2.4 COUNTERTOPS**

- A. Fabricate in largest sections practicable.
- B. Fabricate with joints flush on top surface.
- C. Fabricate countertops to overhang front of cabinets and end of assemblies 25 mm (one inch) except where against walls or cabinets.
- D. Provide 1 mm (0.039 inch) thick metal plate connectors or fastening devices (except epoxy resin tops).
- E. Join edges in a chemical resistant waterproof cement or epoxy cement, except weld metal tops.
- F. Fabricate with end splashes where against walls or cabinets.
- G. Splash Backs and End Splashes:
  1. Not less than 19 mm (3/4 inch) thick.
  2. Height 100 mm (4 inches) unless noted otherwise.
- H. Drill or cutout for sinks, and penetrations.
  1. Accurately cut for size of penetration.
- I. Methyl Methacrylic Polymer Tops:
  1. Fabricate countertop of methyl methacrylic polymer cast sheet, 19 mm (3/4 inch) thick.
  2. Fabricate back splash and end splash to height shown.
  3. Fabricate skirt to depth shown.
  4. Fabricate with marine edge where sinks occur.
  5. Fabricate in one piece for full length from corner to corner up to 3600 mm (12 feet).
  6. Join pieces with adhesive sealant.

7. Cut out countertop for lavatories, plumbing trim.
8. Provide concealed fasteners and epoxy cement for anchorage of sinks to countertop.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLATION**

- A. Before installing countertops verify that wall surfaces have been finished as specified and that mechanical and electrical service locations are as required.
- B. Secure countertops to supporting rails of cabinets with metal fastening devices, or screws through pierced slots in rails.
  1. Where type, size or spacing of fastenings is not shown or specified, submit shop drawings showing proposed fastenings and method of installation.
  2. Use round head bolts or screws.
- C. Sinks
  1. Install methyl methacrylic polymer sinks in manufacturers recommended adhesive sealer or epoxy compound to underside of methyl methacrylic polymer countertop.
    - a. Bolt or screw to countertop to prevent separation of bowl and fracture of adhesive sealant joint.
    - b. Install tail piece.

#### **3.2 PROTECTION AND CLEANING**

- A. Tightly cover and protect against dirt, water, and chemical or mechanical injury.
- B. Clean at completion of work.

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