

**SECTION 12 36 00
COUNTERTOPS**

PART 1 - GENERAL

1.1 DESCRIPTION

- A. This section specifies quartz solid surface countertops and backsplashes.

1.2 RELATED WORK

- A. DIVISION 22, PLUMBING.
- B. DIVISION 26, ELECTRICAL.

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" = 1" 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.
- B. American National Standards (ANSI):
 - A117.1.....Accessible and Useable Buildings and Facilities
- C. Architectural Woodwork Institute (AWI): Quality Standards, for cast plastic fabrications.
- D. International Solid Surface Fabricators Association (ISSFA):
 - 2-01.....Classification and Standards Publication of Solid Surfacing Material
- E. National Fire Protection Association (NFPA):
 - 101.....Life Safety Code (Code for Safety to Life from Fire in Buildings and Structures)
- F. United States Department of Justice (USDOJ):
 - ADA.....Americans with Disabilities Act

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Quartz Solid Surfacing:

1. Solid, non-porous, homogeneous blend of crushed quartz aggregate, resin and pigments fabricated into flat slabs. Quartz solid surfacing shall be anti-microbial, and color and pattern shall extend throughout thickness of material.
2. Performance properties required:

Property	Result	Test
Compressive Strength	10,430 psi (dry) minimum 11,260 psi (wet) minimum	ASTM C170
Bond Strength	205 psi minimum	ASTM C482
Modules of Rupture	2,110 psi minimum	ASTM C99
Surface Burning	Flame spread 25 maximum Smoke developed 255 maximum	ASTM E84
Hardness	7 minimum	Mohs hardness scale
Abrasion Resistance	223 maximum	ASTM C501
Thermal Shock Resistance	Passes 5 cycles	ASTM C484
Stain and Acid Resistance	Passes	ANSI 2124.6 and ASTM D2299.
Fungi and Bacteria Resistance	Passes	ASTM G21 and ASTM G22

3. Color: As indicated in Article - Countertop Schedule of this Section.
4. Edge Treatment: As indicated on Drawings.
5. Acceptable Products:
 - a. Cambria, Cambrian Collection, or equal as acceptable to Owner and Architect.

2.2 FABRICATION - GENERAL

- A. General: Fabricate work to meet requirements of Contract Documents as indicated by final reviewed submittals for the work, and instructions and recommendations of product manufacturers.
- B. Size and Thickness: Use materials of size and thickness required. If not indicated by Contract Documents, select size and thickness to provide strength and durability in finished work for intended application. Work to required dimensions, using proven fabrication details.
- C. Coordination:
 1. General: Coordinate fabrication with adjacent construction. Correct any errors, omissions or inconsistencies before proceeding.

2. Related Components: Provide holes and cutouts to receive plumbing fixtures, accessories and related components or for penetrations. Cut, drill and tap work to receive fasteners, hardware and like components.

D. Exposed Work:

1. General: Carefully match exposed work to produce continuity of design and line, and accurate relation of planes, angles and curves.
2. Surfaces: Select materials for flatness, smoothness and freedom from surface blemishes forming marks, roughness and like conditions. Imperfections will not be acceptable.
3. Sizes: Materials shall be one-piece units of required dimensions for application.
4. Forming: Form materials and fabrications using a template type device as applicable.
5. Joints: Joints in work shall be accurately fitted and rigidly secured with inconspicuous hairline contacts without voids using adhesive as recommended by manufacturing. When required, provide chemical or heat welded joints which are true and flush with parent material surfaces.
6. Edge Finish: Rout and finish edges to smooth, uniform appearance and finish. Remove arrises from cut edges, and ease exterior corner edges to radius of 0.5mm (1/64 inch).

- E. Reinforcement: Reinforce work as required to meet performance requirements and for anchoring work to supporting construction. Reinforcement shall be concealed in the complete work.

F. Assembly Methods:

1. General: Except as otherwise required, methods of assembly and joining shall be proven methods optional with manufacturer. Methods shall produce workmanship and finished items acceptable to Architect.
2. Fasteners: Conceal fasteners wherever possible.
3. Distortion and Overstress: Fabricate and fasten work so that the work will not be distorted nor the work or fasteners overstressed from the expansion, contraction and other movement of the work.

- G. Finish: Exposed and semi-exposed surfaces in completed work shall be smooth and of uniform finish and appearance.

2.3 QUARTZ SOLID SURFACING

- A. General: Countertop units shall be of size, profile and details as required by Contract Documents. Provide 100mm (4 inch) high backsplash and sidesplash as applicable, except as otherwise required by Contract Documents.

- B. Standard and Grade: Meet applicable requirements of AWI - Quality Standards, Premium Grade.
- C. Materials: Fabricate countertops of quartz solid surfacing of following thickness:
 - 1. Horizontal Surfaces: As indicated on Drawings, but 28mm (1-1/8 inch) minimum thickness.
 - 2. Vertical Surfaces: As indicated on Drawings, but 19mm (3/4 inch) minimum thickness.
- D. Reinforcement: Provide quartz solid surfacing reinforcement strips at horizontal seams, corners, cutouts where remaining material is less than 3 inches and where additional reinforcement and thickness is required to prevent cracking, meeting instructions and recommendations of manufacturer.
- E. Fittings and Anchorages: Provide fittings and anchorages as required for installation and coordination with adjacent work.
- F. Drill or cutout for sinks, and penetrations. Accurately cut for size of penetration.
- 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.

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. Before installing countertops verify that wall surfaces have been finished as specified and that plumbing service locations are as required.
- C. General: Install work meeting requirements of Contract Documents, as indicated by final reviewed submittals for work, and meeting instructions and recommendations of product manufacturers. Consult with manufacturers for conditions not covered by printed instructions.
- D. Standard and Grade: Meet requirements of AWI Quality Standards, Section 1700 - Installation of Woodwork as applicable, for respective plastic fabrication item of work and quality grade.
- E. Modifications: Perform modifications to and provide appurtenances necessary for proper fit and interface with adjoining components.

F. Methods:

1. See respective specification sections for work in which accessories are to be embedded or built-in, including requirements for any additional reinforcement required.
2. Scribe and cut components to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts. Do not cut or trim components in any manner which would damage finish, decrease strength, or result in a visual imperfection or a failure in performance of plastic fabrication unit.
3. Install work accurately to location, level and plumb; free of twist, rack and movement, and with neatly fitted joints and intersections. Shim as required using concealed shims. Anchor components in-place providing permanent support and installation.

G. Finished Surfaces: Entire surfaces of plastic fabrications shall be uniform, smooth, straight, and free from buckles, waves or projecting edges.

3.2 PROTECTION AND CLEANING

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

3.3 COUNTERTOP SCHEDULE

- A. SS-1 Transaction Top at Reception:
 1. Type: Quartz solid surfacing.
 2. Manufacturer: Cambria, Cambrian Collection.
 3. Color: Buckingham.
- B. SS-2 Transaction/Work Surface Tops at Reception:
 1. Type: Quartz solid surfacing.
 2. Manufacturer: Cambria, Cambrian Collection.
 3. Color: Buckingham and Cuddington.
- C. SS-3 Countertop at Staff Areas:
 1. Type: Quartz solid surfacing.
 2. Manufacturer: Cambria, Cambrian Collection.
 3. Color: Linwood.

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