

## SECTION 066500 – SOLID SURFACE FABRICATIONS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

#### 1.2 SUMMARY

- A. This Section includes homogenous cast polymer solid surface fabrications for the following:
  - 1. Countertops with backsplashes and finished cutouts for stainless steel undermount sinks.
  - 2. Work surfaces.
  - 3. Transaction counters.
  - 4. Door Thresholds.
- B. Related Sections include the following:
  - 1. Division 06 Section "Miscellaneous Rough Carpentry" for wood, blocking, and shims, required for installing solid surface fabrications.
  - 2. Division 06 Section "Interior Finish Carpentry" for interior carpentry exposed to view that is not specified in this Section.
  - 3. Division 06 Section "Interior Architectural Woodwork" for millwork onto which solid surface fabrications are to be installed.
  - 4. Division 15 Section "Plumbing" for undermount sinks to be installed in solid surface public restroom countertops.

#### 1.3 SUBMITTALS

- A. Product Data: For each type of product indicated, including accessories.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
  - 1. Show details half-full size, minimum.
  - 2. Show locations and sizes of shims and, blocking, as well as reinforcement specified in other Sections.

3. Show locations and sizes of cutouts and holes for plumbing fixtures, faucets, soap dispensers, shower accessories and other items installed in solid surface fabrications.
- C. Samples for Initial Selection: Manufacturer's color chips showing full range of colors and patterns.
- D. Samples for Verification:
  1. Solid-surfacing materials, 6 inches (150 mm) square, showing edge profile, outside corner, and field seam.
- E. Product Certificates: For each type of product, signed by product manufacturer.
- F. Qualification Data: For Installer/Fabricator.
- G. Special Warranties: Samples of manufacturer's standard and special warranties.

#### 1.4 QUALITY ASSURANCE

- A. Fabricator/Installer Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Source Limitations: Engage a qualified firm to assume undivided responsibility for production of solid surface fabrications.
- C. Referenced Quality Standards:
  1. American National Standards Institute (ANSI).
  2. American Society for Testing and Materials (ASTM).
  3. National Electrical Manufacturers Association (NEMA).
  4. National Sanitation Foundation (NSF).
- D. Fire-Resistance Characteristics: Provide solid surface fabrications with the following surface-burning characteristics complying with ASTM E 1264 for Class A materials as determined by testing identical products per ASTM E 84:
  1. Flame-Spread Index: 25 or less.
  2. Smoke-Developed Index: 450 or less.
- E. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 01 Section "Project Management and Coordination."

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver solid surface fabrications until painting and similar operations that could damage products have been completed in installation areas. If products must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

## 1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install solid surface fabrications until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where solid surface fabrications are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
  - 1. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating solid surface products without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

## 1.7 COORDINATION

- A. Coordinate sizes and locations of all required blocking, reinforcements, plumbing penetrations and other related units of Work specified in other Sections to ensure that solid surface products can be supported and installed as indicated.

## 1.8 WARRANTY

- A. Provide manufacturer's warranty against defects in materials.
  - 1. Warranty shall provide material and labor to repair or replace defective materials.
- B. Manufacturer's warranty period:
  - 1. Ten years from date of substantial completion.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Homogenous Cast Polymer Solid-Surfacing Material: Homogeneous solid sheets of a composition of acrylic polymer, tri-hydrate filler and pigment complying with ISSFA-2.

1. Performance Characteristics:

Property	Typical Result	Test
Tensile Strength	6,000 psi	ASTM D 638
Flexural Strength	10, 000 psi	ASTM D 790
Wear and Cleanability	Passes	ANSI Z124.3 & Z124.6
Stain and Resistance:	Passes	ANSI Z124.3 & ANSI Z124.6
Fungus and Bacteria Resistance	Does not support microbial growth	ASTM G21 & G22
Boiling Water Resistance	No visible change	NEMA LD 3-2000 Method 3.5
Ball Impact	No fracture – ½ lb. ball	NEMA LD 3-2000
Porosity/Absorption	Long-term 0.4% (3/4") 0.6% (1/2") 0.8% (1/4")	ASTM D 570
Flammability	(Class I and Class A)	ASTM E 84 NFPA 255 & UL 723
Flame Spread Index	< 25	
Smoke Developed Index	< 25	

2. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:

- a. ABA Industries.
- b. Avonite, Inc.

- c. E. I. du Pont de Nemours and Company.
- d. Formica Corporation
- e. LG Chemical, Ltd.
- f. Meganite Inc.; a division of the Pyrochem Group.
- g. Nevamar Company, LLC; Decorative Products Div.
- h. Samsung; Cheil Industries, Inc.
- i. Swan Corporation (The).
- j. Transolid, Inc.
- k. Wilsonart International; div. of Premark International Inc.

## 2.2 MISCELLANEOUS MATERIALS

- A. Furring, Blocking and Shims: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Sub-base material: Moisture- and mold-resistant core gypsum board, ASTM C 630 C/C 630 M.
- C. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

## 2.3 FABRICATION, GENERAL

- A. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
  - 1. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.
- B. Shop-cut openings to maximum extent possible to receive hardware, appliances, plumbing fixtures, shower accessories, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

- 2.4 SOLID-SURFACING-MATERIAL COUNTERTOPS, BACKSPLASHES; WORK SURFACES; TRANSACTION COUNTERS; THRESHOLDS.
- A. Basis-of-Design Product: Subject to compliance with Project requirements, provide Corian Solid Surfaces by the Dupont Company, or comparable product by one of the above-listed manufacturers.
  - B. Solid-Surfacing-Material Thickness: 1/2 inch (13 mm).
  - C. Shapes, Sizes and Profiles: As scheduled and where indicated on Drawings.
  - D. Color: SS-1, as specified in Tenant Fit-out Finish Schedule.
  - E. Fabricate countertops and thresholds, in one piece, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.
  - F. Countertops:
    - 1. Fabricate tops, with shop-applied edges of materials and configuration indicated on Drawings.
    - 2. Fabricate tops with loose backsplashes for field application.
    - 3. Install specified undermount sink bowls in countertops in shop.
    - 4. Drill holes in countertops for plumbing fittings in shop.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Before installing solid surface fabrications, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.
- B. Examine substrates and conditions, with fabricator present for compliance with requirements for installation tolerances and other conditions affecting performance of work.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### 3.2 INSTALLATION

- A. Assemble solid-surface fabrications and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.

- B. Install solid-surface fabrications level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches (3 mm in 2400 mm).
- C. Scribe and cut solid-surface fabrications to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- D. Countertops, and Worksurfaces: Install components plumb, level and rigid, and scribed to adjacent finishes, in accordance with approved shop drawings and product data.
  - 1. Provide products in the largest pieces available.
  - 2. Form field joints using manufacturer's recommended adhesive, with joints inconspicuous in finished work.
  - 3. Except where indicated, exposed joints/seams shall not be allowed.
  - 4. Carefully dress joints smooth, remove surface scratches and clean entire surface.
  - 5. Cut and finish component edges with clean, sharp returns.
  - 6. Rout radii and contours to template.
  - 7. Allow a minimum of 1/16 inch (1.5 mm) to a maximum of 1/8 inch (3 mm) clearance between walls and countertops.
  - 8. Reinforce field joints with solid-surface strips extending a minimum of 1 inch on either side of the seam with the strip being the same thickness as the top.
  - 9. Install countertops with no more than 1/8 inch (3 mm) sag, bow or other variation from a straight line.
  - 10. Adhere applied sidesplashes to countertops using manufacturer's standard color-matched silicone sealant.
  - 11. Sinks: Adhere undermount sink bowls to countertops using manufacturer's recommended adhesive and mounting hardware.
- E. Thresholds: Adhere thresholds to clean concrete substrate using manufacturer's recommended adhesive and sealant.
- F. Touch up finishing work specified in this Section after installation of solid surface fabrications. Repair superficial damage to a depth of 0.010 inch (0.25 mm) by sanding and polishing.

### 3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective work, where possible, to eliminate functional and visual defects; where not possible to repair, replace solid-surface fabrications. Adjust joinery for uniform appearance.
- B. Clean solid-surface fabrications on exposed and semi-exposed surfaces of adhesives, sealants and other stains.
- C. Protect surfaces from damage until date of substantial completion.

END OF SECTION 064023